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CORINTH IN PREHISTORIC TIMES

THE theory recently advanced by Dr. Walter Leaf¹, that Corinth was not inhabited in Mycenaean times but existed merely as a geographical name designating Acrocorinth, has met with a speedy refutation. Dr. Leaf, arguing in 1914 that no Mycenaean settlement at Corinth was yet known and confidently prophesying that none would ever be found, ventured to identify the Homeric Ephyra with an entirely hypothetical site on a more or less hypothetical river in Sicyonian territory. Recent exploration in the Corinthia, however, has led to the discovery, not of one possible Ephyra, but of a really embarrassing number of claimants to the title. In order to present the prehistoric status of Corinth in its right light and to correct certain mis-statements which have been made, a brief account of the archaeologically established facts is here offered. On the accompanying map (Fig. 1)² each site has been indicated by a number corresponding to that given it below. The following are the prehistoric sites now known in the vicinity of Corinth:

1. At Old Corinth in 1896 on the low hill to the southeast of the square of the modern village a group of rock-cut tombs was discovered³ containing twenty-one vases of a rather primitive type of polished and glazed ware belonging to the Early Helladic Period.⁴ Farther to the west the hill on which stands the temple of Apollo consists in part of prehistoric deposit, some of it still lying in its stratified sequence. Both to the north and south of the temple potsherds have been found, including considerable quantities of neolithic as well as Early and Middle Helladic wares. Likewise in the eastern part of the agora in 1915 a pocket filled with sherds of glazed ware (Early Helladic) was excavated. Thus it is clear that already from remote prehistoric times a settlement surrounded the hollow in which flowed the spring that, as

¹ *Homer and History*, pp. 209 ff.; *Cl. R.* XXXII, 1918, p. 87.

² The map is based on the British Admiralty chart. For help in its preparation I am much indebted to Dr. A. K. Orlandos of the Greek Ministry of Education, and to Mr. O. J. Teegen of the School of Architecture, Harvard University.

³ *A. J. A.* 1897, pp. 313-332.

⁴ For the classification of the pottery see p. 5 below.

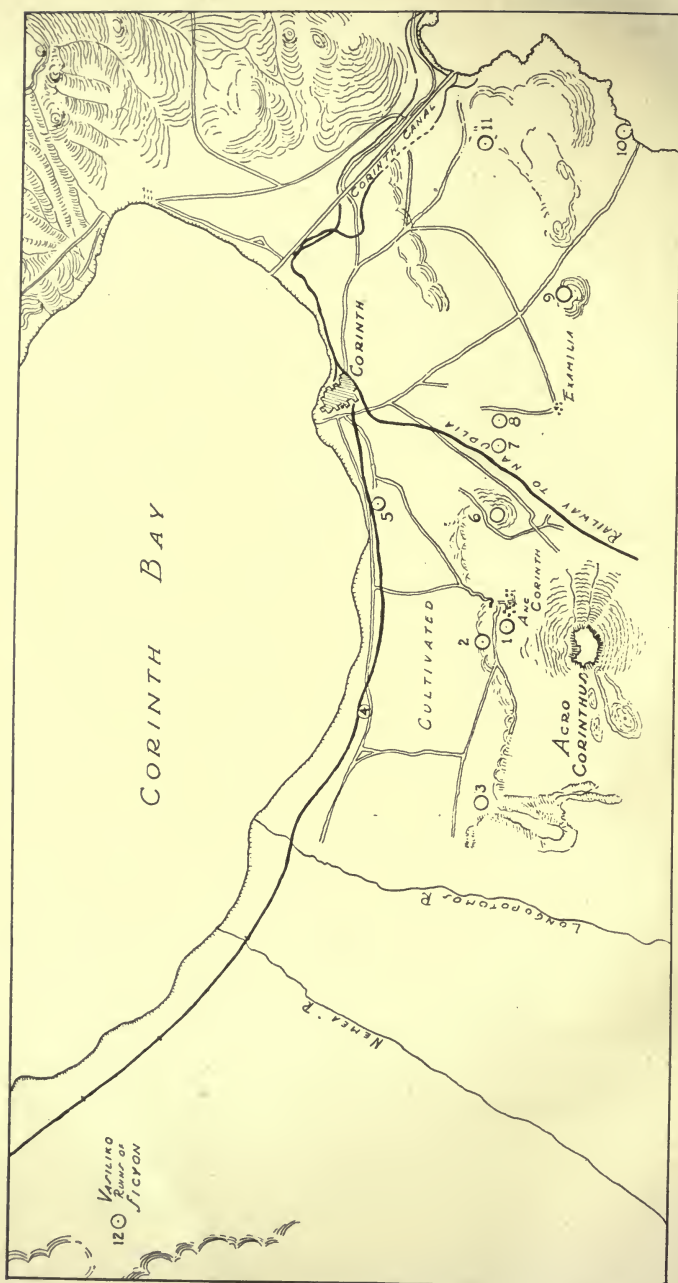


FIGURE 1.—PREHISTORIC SITES NEAR CORINTH.

Peirene, was destined to become the centre of classical Corinth. It is a noteworthy fact that no Mycenaean pottery—or at any rate only an insignificant number of sherds—has yet come to light at this site; but it should be observed that there has as yet been almost no investigation of the prehistoric deposit, and when the north side of the temple-hill is excavated, where the early stratification seems to be best preserved, it is by no means unlikely that Mycenaean remains will be found. Not much can be expected, however, for before the temple was built the top of the hill appears to have been irregularly shaved off, as a result of which in many places Greek deposit now rests directly on that of the Early Helladic Period. A more thorough cutting down of the hill occurred in the Roman period and, in consequence, to the north of the temple immediately below the bed of the Roman pavement we come upon Middle Helladic or even Early Helladic débris. It is to be hoped nevertheless that at some point the upper layer of the prehistoric stratum may be found undisturbed and there seems good reason to believe that it will demonstrate, just as proved to be the case at Troy, unbroken continuity of habitation.

2. About half a mile to the northwest of the temple of Apollo a ruined windmill known as “Mylos Chelioutou” crowns a small isolated hill at the edge of the upper plateau overlooking the plain to the north. Prehistoric potsherds comprising Early, Middle, and Late Helladic wares are scattered about this hill and its northern slope. The mound is thickly covered with débris showing evidence of continuous occupation from prehistoric down to recent times. A line of massive stones, projecting slightly above ground and traceable for a considerable distance, may belong to a prehistoric wall. Near by in a deep ravine to the south is a spring. No excavations have yet been made at this site.

3. Two miles to the west of Old Corinth a high circular cliff with flat top, standing conspicuously at the mouth of a deep ravine, bears the appropriate name “Aetopetra” or Eagle Rock (Fig. 2). It commands a splendid view of the fertile plain to the north and dominates an old road leading southward through the hills. One of the Mycenaean highways conjectured by Steffen¹ must have come down this ravine, passing just below the site. Many potsherds have been exposed by ploughing on the summit and others

¹ *Karten von Mykenai*, map.

may be gathered on the slope south of the cliff, among which Early, Middle, and Late Helladic fabrics are all well represented.



FIGURE 2.—AETOPETRA FROM THE NORTH.

A number of house walls also appear cropping out of the ground. Up to the present time there has been no excavation.

4. Near the shore of the Corinthian Gulf, somewhat more than a mile west of Lechaëum, is a slight elevation surmounted by a chapel of St. Gerasimus. In the field about the church Early Helladic sherds have been picked up in abundance, but no other fabrics have yet been observed. This site has not yet been excavated.

5. On a bluff named "Korakou," which juts out close to the sea at a point two-thirds of a mile east of Lechaëum and about two miles west of New Corinth, there is a low but conspicuous mound formed of the débris, etc., of successive prehistoric settlements (Fig. 3). Dr. Leaf is misinformed in asserting¹ that this



FIGURE 3.—KORAKOU FROM THE WEST.

¹ *Cl. R.* XXXII, 1918, p. 87.

site lies in the direction of Sicyon from ancient Corinth, for exactly the reverse is true. Korakou is situated about two and a half miles northeast of Old Corinth and is one mile more distant from Sicyon than is ancient Corinth itself (cf. map, Fig. 1). As a result of excavations carried on at this site a clear and undisturbed ceramic sequence has been brought to light, giving the basis for a division of the prehistoric period of southeastern Greece, subsequent to the Neolithic Age, into three main stages which we have designated the Early, Middle, and Late Helladic Periods respectively.¹ The Early Helladic Period has as its characteristic pottery the fabrics hitherto known chiefly as "urfirnis" wares; the Middle Helladic Period is distinguished by the use of Minyan and Mattpainted wares; and in the Late Hella-



FIGURE 4.—ARAPIZA FROM THE NORTH.

dic Period Mycenaean pottery is predominant. An important result of these excavations is the demonstration that the Mycenaean pottery of the mainland is a direct development of Minyan ware under progressively increasing Minoan influence. A full account of these excavations has been prepared for publication by the writer and will appear shortly.

6. A small prehistoric site has been discovered about a mile and a half east of Old Corinth at the north end of a ridge called "Arapiza" which lies just west of the carriage road from New Corinth to Argos (Fig. 4). Early and Middle Helladic sherds occur here and some Mycenaean ware has also been found. Arapiza is a small mound and probably not very important, but, standing near the chief line of communication between the Isth-

¹ This classification is briefly explained by Wace and Blegen, in *B. S. A.* XXII, pp. 175 ff.

mus and the Argolid, and affording a wide view of the Corinthian plain, it may mark the site of a military post. No excavations have yet been undertaken.

7. Half a mile directly north of the village of Examilia is a circular flat-topped elevation known as "Yiriza" which, rising



FIGURE 5.—YIRIZA FROM THE EAST.

steeply on all sides, forms a prominent feature of the landscape as viewed from the north (Fig. 5). Trial pits dug here in 1916 show that this site was occupied by a flourishing settlement throughout the Early Helladic Period, but no trace of subsequent habitation appeared.

8. A few hundred yards east of Yiriza and just above the road which leads from Examilia to New Corinth is an extensive pre-



FIGURE 6.—GONIA FROM THE NORTHEAST.

historic site (Fig. 6). It occupies a fairly broad but irregular ridge called "Gonia" which falls off steeply on all sides except for a short distance on the west where the slope is more gradual. A number of pits opened in 1916 yielded potsherds representing Neolithic, Early, Middle, and Late Helladic wares.

9. Traces of prehistoric occupation may be seen about one mile east of Examilia along the road to Cenchreae on a hill called "Perdikaria" with a precipitous northern edge. On one of the lower slopes stands a section of terrace wall built of huge stones in Cyclopean style (Fig. 7). This wall was observed in 1906 and



FIGURE 7.—CYCLOPEAN WALL AT PERDIKARIA.

a few Mycenaean potsherds were picked up. Minyan ware has also been found, as well as glazed ware of the Early Helladic Period, and a large quantity of obsidian. Perdikaria offers an admirable location for a settlement, controlling the road from Cenchreae and giving an extensive view toward the Saronic as well as the Corinthian Gulf. No digging has yet been attempted.

10. On the hill just above the northeast mole of the harbor of Cenchreae a few Early Helladic sherds have been found. This site bears evidence of Greek, Roman, and Byzantine occupation as a result of which neither the extent nor the duration of the prehistoric establishment can be determined without excavation. The situation is, however, a highly favorable one and it can

hardly be doubted that an important prehistoric settlement dominated the harbor of Cenchreae.

11. There is a prehistoric site at the Isthmus on the hill above the ruins of the stadium¹, but the cuttings in the rock described by Monceaux appear to date from occupation of the site in the early classical period. The prehistoric remains found here are up to the present time limited to a scanty number of sherds of Early Helladic ware.

Additional sites may yet be discovered by a more systematic exploration, and our knowledge of the prehistoric period will naturally be much enlarged when the sites already found are excavated; but the eleven settlements now known in the limited district about Corinth form a sufficiently striking commentary on the importance and the prosperity of the Isthmian region throughout the whole Bronze Age. Two of these settlements were inhabited in the Neolithic Period. All eleven appear to have flourished in the Early Helladic Period; seven were certainly occupied in the Middle Helladic Period; and six at least continued to exist until Late Helladic civilization was blotted out by the Dorian invasion. Two of the sites occupied in the Early Helladic Period and subsequently abandoned are very small and unimportant. Excavations will probably show that all the remaining settlements maintained their existence in the Middle and Late Helladic Periods.

The prosperity of this region was no doubt largely due to commerce. The results of the excavations at Korakou compared with finds from other points in the Aegean area make it clear that in the Early, Middle, and Late Helladic Periods alike, Corinth was consistently a centre of trade. There was at all times close communication with the Aegean and there were always very definite connections with Boeotia and Phocis to the north. In fact, Corinth seems to have been especially important as an intermediate station on a great trade route from the south to the north,—a route leading from the Argolid, from the Aegean, and even from Crete to the Isthmus and thence across the Corinthian Gulf to Thisbe whence it proceeded overland to Thebes and Orchomenos. The sea route was no doubt safer and certainly far easier than the difficult overland trail through the rugged passes of Mt. Geraneion. Relations with the west are also

¹ Monceaux, *Gazette Archéologique*, X, 1885, pp. 402-406.

evident and grow progressively stronger toward the end of the Bronze Age. Dr. Leaf is surely understating the case when he refers¹ disparagingly to the "trifling coasting traffic of the Gulf and the Four Islands at the mouth of it." We need only remind him that Greek Corinth had grown famous for her wealth and prosperity—dependent on just that traffic—long before she sent colonies to the far west in Sicily. So, too, in Mycenaean days the traffic up and down the Gulf of Corinth must certainly have been considerable and very profitable.

It is hardly necessary to explain here that this traffic was not carried on by large ships which require deep and spacious harbors with elaborately constructed quays. It was carried on by small and readily-handled sailing barks which could easily be drawn up on any sloping sandy beach. Just such a curving beach exists today at the foot of the mound of Korakou and one may often see the fishermen of modern Greece beach their Homeric-looking craft on those very sands. No traces of considerable harbor-works of the prehistoric period have yet been found at any point in Greece; and this in spite of the fact that all fresh discoveries have regularly tended to emphasize more and more the importance and the extent of prehistoric trade relations. Artificially constructed harbors were not essential to the commercial success of Mycenaean navigators; and we need no excavated port at Lechaëum to explain the prosperity of the Mycenaean settlement at Korakou.

Dr. Leaf, quoting from Philippson, paints the climatic conditions of Corinth in extremely dark colors.² To one who has lived there for months at a time and in all seasons of the year the picture is much distorted and exaggerated. Gales do indeed occur at intervals and the dust is sometimes distressing, but no more so than at a score of other places in Greece. On the other hand the regular sea breeze from the Gulf is highly beneficial in cooling the atmosphere in summer and makes many a hot day at Corinth endurable or even pleasant while Athens is sweltering in a calm. We may be perfectly sure that the climatic conditions of Corinth compared favorably with those of other places in the Atreid realm and did not discourage settlement about the Isthmus.

Again, in his estimate of the quality of the soil at Corinth, Dr. Leaf is no more fortunate in his quotation from the same German

¹ *Homer and History*, p. 212.

² *Homer and History*, p. 210.

authority. Indeed when he goes so far as to maintain¹ "there can be no better type of barrenness and desolation," no one familiar with Corinth can refrain from a smile of incredulity. It must be borne in mind that the plain between Corinth and Sicyon, famous in antiquity, and in modern times as well, for its richness and fertility, has the shape of an irregular crescent with a length of a dozen miles and a breadth of two to three. Corinth stands at the eastern, Sicyon at the western end, each roughly equidistant from the sea. Down through the middle of this productive plain, dividing it into two approximately equal parts, runs the Nemea River which in its deeply cut bed marks a natural boundary.² The territory to the east of this river belonged throughout historical times to Corinth; that to the west was Sicyonian. Each city thus possessed an equal share of the land which had become proverbial for its value. There is no evidence whatever to indicate that the boundary was different in prehistoric times. Dr. Leaf, however, apparently seizes the whole of the plain up to Lechaëum and the very gates of Corinth and confers it all on Sicyon. This is certainly improbable in the extreme and cannot be accepted for a moment. If an unequal division of the plain must be made it would seem, up to the present time at least, that Corinth with her numerous settlements was entitled to claim the major portion rather than Sicyon, where only one prehistoric site is yet known. This latter (Fig. 8) is a small site at the extreme end of the promontory jutting out to the east from the plateau on which stands the village of Vasiliko. It is numbered 12 on the map (Fig. 1).

But even though we understand Dr. Leaf's condemnation as being directed merely against the remnant of the territory still conceded to prehistoric Corinth, it is yet far from corresponding with the facts. The steep sides of Acrocorinth are, it must be admitted, both arid and stony, and here, it is true, "the wan blossoms of the asphodel" flourish abundantly in the springtime. But down below on the upper and lower plateau the soil, which is not excessively stony, is not below the average in productivity.

¹ *Op. cit.* p. 211.

² Two and one-half miles east of the Nemea River another stream, the Longopotamos, runs through the plain from south to north. It also has a deeply cut bed and would form a good natural boundary. The Nemea River is, however, the traditional frontier between Corinthia and Sicyonia (cf. Strabo, VIII, 6, 25). It does not affect the argument of this paper, whichever of the two be taken as the boundary.

In and about Old Corinth there are no less than a dozen springs¹ and market gardening is carried on as a very profitable enterprise. The fields about and below Old Corinth can be relied upon to produce good crops of wheat. On the upland rising toward Acrocorinth barley—and at present tobacco—is grown with success. The best land of all—on the lower plateau—is planted with currant vines which, until attacked by the phylloxera, yielded a



FIGURE 8.—PREHISTORIC SITE NEAR VASILIKO (SICYON).

regular and abundant harvest. According to statistics kindly furnished me by the president of the community of Old Corinth, the crop raised in 1918 in this small portion of the Corinthia amounted, apart from the usual abundance of asphodel, to the

¹ The most important of these springs are the following: (1) One-half mile east of the village is a good spring called "Kakavi." (2) One-quarter mile south of the temple of Apollo, issuing from the base of Acrocorinth, is the spring of "Hadji Mustapha" from which we get our drinking water. (3) At the eastern edge of the village is a copious spring called "Murat Aga." (4) About 200 yards farther west is a nameless spring beside a ruined mosque just below the carriage road. (5) In the centre of the village Peirene issues in three outlets: "Palukovrysi" in the plane-tree square, and the "Tsimpidi" and "Kachros" fountains some distance below. (6) By the paved road winding down the steep bluff directly north of the village is a fountain of which I do not know the name. (7) About 150 yards west of this fountain are the Baths of Aphrodite with a copious flow of water. (8) North of the quarter known as "Kutchuk Machala," and about 400 yards northwest of the temple of Apollo, is a spring which waters a large market garden. (9) One-half mile southwest of the temple, at "Anaploga," is a good spring. (10) A half mile west of the chapel of Hagia Paraskeve is a fountain called "Kokkinovrysi." (11) In a deep ravine south of the prehistoric site at "Cheliotomylos" (cf. p. 3 above) is a spring with a considerable amount of water. (12) Between "Cheliotomylos" and the Baths of Aphrodite, in a distance of rather more than half a mile, there are at least four separate springs which are used to irrigate flourishing market gardens.

following totals: wheat and barley (almost evenly divided) 600 tons; hay 700 tons;¹ dried currants 300 tons; tobacco 110,000 pounds; cheese 300,000 pounds; wine 50,000 gallons; olive oil 20,000 gallons. The yield of grain was exceptionally good that year but on the other hand the planting was very light—not much more than one-half the normal amount—owing to the shortage of seed.

Farther to the east in the neighborhood of Examilia the situation is the same. There are numerous springs and market gardens, one of which is noted for its orange groves and fruit trees. The lowland returns a good yield of currants, grapes, and wheat, while the upland and the hills ascending to the back of the Isthmus as well as the latter itself give a large return of barley.² And finally the higher hills including Acrocorinth, Mt. Oneion, and the Geraneian range of Perachora provide excellent grazing ground for large herds of sheep and goats in consequence of which the manufacture of cheese is an important industry.

The Corinthia today maintains ten or a dozen villages with a rural population, not including New Corinth, of considerably more than 10,000. These villages are not only independently self-supporting in the matter of food supplies, but produce annually and market in New Corinth a fair amount of grain, large quantities of cheese, wine, and tobacco, and an average of 25,000,000 Venetian pounds of dried currants.³ A market of such proportions would seem in large part to justify the existence of the town of New Corinth. Dr. Leaf may attempt to discount the currant crop on the ground that the currant vine, being a Venetian importation, was unknown in prehistoric times; but one must not overlook the fact that the currant vineyards occupy the most productive land in the Corinthian district which was fully as fertile in antiquity as it is today. We may therefore safely conclude that Corinth in the prehistoric period, far from being a "type of barrenness and desolation," was, with its many springs and its desirable land, a highly attractive region for settlers, well able to sustain a considerable population.

Dr. Leaf's theory of the non-existence of Corinth in the Mycen-

¹ Hay in the Peloponnesus usually means barley which is cut green.

² Estimated total for 1918: 425 tons barley and 210 tons wheat.

³ The figure is taken from Inglezi's 'Ὀδηγὸς τῆς Ἑλλάδος. The Venetian pound, which is regularly used in the currant trade, is slightly heavier than the English pound.

aeon Period, as well as his conclusions based thereon, must accordingly be revised. Corinth was an important and flourishing region throughout the Bronze Age. Its geographical position made it a distributing centre of trade—a station of consequence on a great trade route from south to north. It included an attractive agricultural district by no means inferior to that of the Argolid in quality. The large number of inhabited sites makes it certain that the Mycenaean spirit of enterprise did not fail to exploit these natural advantages. The aggressive race of which Agamemnon was the head was not deterred by climatic conditions, nor even by the fear of disastrous earthquakes, from establishing itself firmly about the Isthmus. Indeed it may be more than a shrewd surmise that the King of men himself derived a considerable part of his royal income from the Isthmian trade. In conclusion, therefore, we are amply justified in taking Dr. Leaf at his word,¹ and expecting him to admit that he has used a faulty block as the corner stone of his theory.

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¹ *Homer and History*, p. 214.

TWO HEADS OF NEGRESSES

REPRESENTATIONS of negroes in Greek art both in sculpture¹ and in painting are by no means rare, ranging as they do from life-size figures to heads on the fractional currency of various cities.² Their ugliness seems to have appealed alike to sculptor, engraver, and painter, and their prophylactic³ quality to the populace throughout the Mediterranean. This, and the universal popularity of the myth of Lamia, would lead one to expect a similar abundance of representations of negresses in the arts and crafts of the Ancients, yet in point of fact only very few have come to light. I have not been able to find more than three records of a negress' head modelled in the round and two negresses on Greek vase-paintings.

Of the first, one is recorded by E. V. Stern in *Jh. Oest. Arch. I. VII*, 1904, p. 201, where he describes an incomplete terracotta head of a negress with black glaze found at Olbia. In the same paper⁴ he deals with a bronze vessel made in the form of the bust of a young girl whom he describes as a negress. A glance at the illustrations (*op. cit.* pp. 197 ff., 3 figs.) can, however, only lead one to the conclusion that such a head, such a profile, and such hair—conventionalised though it be—cannot be intended to represent a young negress. The face is essentially Slavonic in character and might belong to a Russian peasant girl of the present day. The two other negress heads are more fully described (*Bull. d. Ist.* 1866, p. 236 and 1872, p. 83, No. 36), the former being a vase excavated in Etruria modelled in the shape of two Janiform heads—the one a realistic head of a negro girl painted black, the other a head of a Greek girl slightly archaic in style and pale in colour. Above both heads is the inscription

¹ Reinach, *Rép. Sculpt.* Index, 'Nègres,' 'Esclaves.'

² *British Museum Catalogue, Italy, Etruria*, p. 15, Nos. 17–21: *Central Greece*, Delphi, p. 25, Nos. 6–9, pl. IV: *Troas, etc.*, Lesbos, p. 153, Nos. 42–45, pl. XXX, 19.

³ The prophylactic quality of negroes has been discussed by A. J. B. Wace, *B.S.A. X*, 1903–1904, pp. 107 ff.

⁴ Summary in *A.J.A. IX*, 1905, p. 215.

ΗΟΡΑΙΣΚΑΛΟΣΝΑΙ. The latter vase was excavated at the Certosa near Bologna, and is a rhyton of Janiform shape again with the contrasted heads of a Greek girl and of an "Ethiopian woman."

The vase paintings have both been published by M. Mayer, 'Noch einmal Lamia' (*Ath. Mitt.* XVI, 1891, p. 300 ff. and pl. IX). Of these only the "Lamia" vase in the National Museum at Athens is of importance¹; and this, according to Mayer, is a portrayal, or rather a free adaptation of a scene from a contemporary² satyric comedy.

Mythology tells us of Lamia, a daughter of the royal house of Libya, the black princess of whom Zeus was enamoured and whom Hera in her jealousy first caused to devour her own children and then, turning her into a hideous creature, made her live by devouring the children of others. Folk-lore popularized her even more, and to the childhood of Greece she was the Bogey who ate up naughty children; while the modern Greeks³ still tell of her as a sea-monster⁴ who eats up the sun's rays and causes eclipses. The popular satyric⁵ comedies seem to have represented her as an evil daimon of negroid appearance who was justly tormented by the Satyrs,



FIGURE 1.—JANIFORM
OENOCHOE.

¹ The second painting of the negress Lamia (?) is figured in the above mentioned article on p. 306, being taken from a rough and ugly Boeotian vase of the fourth century B.C. The coarse and sketchy drawing is not without a certain repulsive realism.

² On stylistic grounds Mayer assigns the vase—a lecythus, H. 0.315 m., B. F. on white ground—to the first half or middle of the fifth century. The painting shows a nude negress of hideous appearance bound to a palm-tree and tormented by Satyrs.

³ Roscher, *Lexikon*, s. v. 'Lamia,' II, 1821.

⁴ The ancient myths call her the mother of Scylla, which explains her position as a sea-monster. Roscher, *loc. cit.*

⁵ Daremberg Saglio, s. v. 'Lamia,' p. 908. Cf. references to her, Aristoph. *Vesp.* 1177, etc.

the followers of the good god Dionysus; and, though the comedies are lost to us, Mayer is probably right in recognizing such a scene on the lecythus of the Athenian National Museum.

The rarity of negress types has lead me to the conclusion that



FIGURE 2.—MALE HEAD FROM OENOCHOE.

it may be worth describing two representations of negresses—hitherto unpublished—in my possession.

1. Oenochoë (Figs. 1, 2, 3); H. 7.1"; the body is the natural terracotta colour and modelled to represent two heads back to back,¹ the one a male head (Fig. 2) with thin finely shaped nose, protruding beard and long moustaches; the other a hideous head

¹ In addition to the Janiform heads—negresses and Greek girls—cited above, compare a vase of similar style and period to ours in the British Museum, E. 786 (*Guide Grk. and Ro. Antiq.* 1908, fig. 93), a fifth century rhyton with heads of a satyr and a maenad.

of a negress (Fig. 3) with high cheek-bones, broad flat nose, large mouth with very thick lips between which appears a row of big teeth; she seems to wear a thick close-fitting cap which merges at the sides into the hair of the male head. The foot is long and thick; the neck thick and crowned by a trefoil lip. The black colour



FIGURE 3.—HEAD OF NEGRESS FROM OENOCHOE.

remains around the foot, on the neck, and on the handle. Traces of red painting remain around the neck—below the black band—on the throat of the male head below his beard, and on his lower lip. Traces of black remain on his moustache and on the nose of the negress.

Though its provenance is unknown to me the fabric of this oenochœ leads one to suppose that it is Attic; and from the style of the male head it must be placed in the first half of the fifth century B.C. Nor does the presence of the negress' head quarrel

with this dating, for representations of negroes were made at Athens as early as 500 B.C.¹

It is the characteristic of many Janiform representations to portray either the two contrasting aspects of a single being, as in the case of Dionysus bearded and beardless on coins of Tenedos,² or of Boreas with dark face and light face on the R. F. vase published by Stephani³; or such representations may portray two contrasting beings welded—often humourously—into one. Our vase obviously belongs to the latter class; the male head is clearly a fine example of the bearded Dionysus, the kindest and most genial of the gods; and what better contrast to him could be found than the children's Bogey, the hideous big-toothed⁴ negress Lamia, whom we have already seen in the popular satyric comedies punished by the followers of Dionysus himself? Since there was an African Dionysus, son of Ammon,⁵ worshipped at least as early as the fifth century B.C., this combination of the African monster Lamia with Dionysus is particularly apt.

2. Grey banded agate carved in the round (Fig. 4); Ht. 1.25", representing three negroid busts back to back. The black portion of the stone is reserved for the head of a negress whose features, though true to life, are not exaggerated; a white band in the stone—shaped like an elongated horseshoe—is cleverly adapted to form the edging of a veil, carved in a grey section of the stone, draped over her head and across her chest. The second head is that of a middle-aged negro; he has tightly curling

¹ Cf. the fine vase in the shape of a negro's head published in 'Εφ. 'Αρχ. 1894, pp. 127 ff., pl. 6. For other vases of similar shape compare *B. M. Vases* IV, G. 155, oenochoë from Cephalus in Cos; and G. 156, *askos* from Capua. Perhaps the most striking of all Greek pictures of negroes is to be found on the Bousiris vase, Ionian, sixth century B.C., Furtwängler-Reichhold *Vasenmalerei*, pl. 51; vol. I, p. 255.

² *B. M. C., Troas, etc.*, pl. XVII; cf. also Roscher, *s.v.* 'Janus,' II, p. 54, who regards the heads not as male and female but as the two types of Dionysus. These coins are, however, a much discussed subject, Wroth regarding them as rather depicting two contrasting beings, male and female, Zeus and Hera (Wroth *Introd. B. M. C. Troas*, p. xlviii) welded into one.

³ *Ann. d. Ist.* XXXII, pl. L. M., p. 332, also Roscher, *s.v.* 'Boreas,' I, p. 809.

⁴ Mayer in the paper cited above (*Ath. Mitt.* XVI, 1891) draws attention to the big teeth of Lamia, the devourer of children, as depicted on the lecythus in Athens.

⁵ A. B. Cook, *Zeus*, I, p. 373 ff.; cf. a Janiform marble bust in the Vatican with heads of bearded, horned Ammon and bearded, wreathed Dionysus, after a fifth century original, Amelung, *Sculpt. Vatic.* I, p. 657, No. 523, pl. 70.

hair and beard, the latter close cropped, and a thin moustache. The third head portrays a negro youth, beardless and with hair like that of the older man. The eyes of all three heads have semi-lunar drilled pupils. Eye-lids and brows are well marked.



FIGURE 4.—TRICEPHALIC AGATE: A, THE MALE HEADS; B, HEAD OF NEGRESS (ENLARGED); C, BEARDED MALE HEAD AND NEGRESS.

A small vertical shaft has been drilled down the centre of the agate. There is a small chip over the left eye of the negro youth. Purchased in Alexandria.

Two explanations occur to one of the purpose which this agate may have served; either it may be the handle of the lid of some agate casket or vase, such as the Tazza Farnese; or it may have been the head of a small sceptre. Figure 5 shows a Roman small bronze coin of the first century of our era (Cohen, VIII, p. 272, 53, wrongly described as "Aelius?") with a bust—probably that of Augustus—mounted upon a short sceptre, and it is conceivable that our stone may have served a similar purpose.¹

Ancient gems carved in the round are of comparatively rare occurrence. According to Furtwängler² they were first produced in the Hellenistic age and were already popular under the

¹ Cf. the sceptre of agate from Curium in Cyprus; Cesnola *Cyprus*, p. 309, fig.

² *Antike Gemmen*, III, pp. 335 ff. and p. 458.

Ptolemies. With the exception of a small figure of Aphrodite wrought in chalcedony the few examples that he mentions are all portraits belonging to the first and second centuries of our era. But Pliny (XXXVII, 8, 108)¹ describes a large statue carved in topaz of Arsinoe, wife of Ptolemy Philadelphus who reigned 285-246 B.C.

I cannot find any record of a gem comparable to the one here published, which appears to be unique both in its form and in its



FIGURE 5.—ROMAN BRONZE COIN.

subject of negro portraiture. In seeking to assign a date to such a thing one must be guided more by the work of gem-engravers than by that of sculptors, and one naturally turns for reference to the big cameos produced, as our agate probably was, by Alexandrian artists of

the Ptolemaic and Roman periods and copied by the Romans who were fascinated by such gorgeous works of art. Moreover, a comparison of the technique employed in carving the eyes will be one of our surest guides to dating. The eyes on our stone have pupils which are rendered as semi-lunar sinkings which, in the two male heads especially, give the effect of an upward glance. An early Ptolemaic cameo, a sard in Vienna,² with the conjoined busts of Ptolemy Philadelphus and Arsinoe II, has the lower half of both iris and pupil marked by an engraved semi-circular line which gives the eyes an upward glance; while another of Ptolemy Soter³ has drilled pupils, but circular in shape, which give a staring appearance. It is only when we come to the first century of our era that we find on a cameo eyes carved with the pupils rendered as semi-lunar sinkings, and these appear on a large sard (18 x 26 cm.) in the Hague Collection,⁴

¹ In XXXVII, 8, 118, he also describes a statue of Nero made of jasper.

² Furtwängler, *Antike Gemmen*, I, pl. LIII, 1; II, p. 250; III, pp. 155 ff. and Delbrueck, *Antike Porträts*, pl. 58, 15. The latter points out, p. LII, note 1, that a plastic rendering of iris and pupil is the rule on gems even of early date.

³ Furtwängler, *loc. cit.* I, pl. LIX, 3; II, p. 266.

⁴ Furtwängler *loc. cit.* I, pl. LXVI, 1; II, p. 304; Claudius triumphant to right in a car accompanied by Messalina (or Agrippina?), Britannicus, and Octavia; the emperor as Jupiter, his consort as Ceres: a Victory flies to crown them: the car is drawn by two centaurs of whom the foremost carries a trophy and shield and tramples on two crouching captives. The work is somewhat coarse but striking.

one which, if it is of Roman work, is certainly inspired by Alexandrian art. This modelling of the eyes is particularly clear on the heads of Claudius, of Victory, who flies to crown him, and of the two centaurs who are harnessed to the triumphal car. The portrait of Claudius himself and the coiffure of his daughter Octavia fix the date of this large cameo, which must belong to that emperor's reign.

On this analogy, then, I am inclined to place our agate between 50 B.C. and 50 A.D., accounting for its artistic superiority by the supposition that it is the work of an Alexandrian Greek who was a master of his craft, and bearing in mind the fact that a technique which appeared at Rome about 40 A.D. may have been in vogue at Alexandria nearly a century before. The heads are distinguished from other representations of negro heads—with the exception of the fine bronze head in the British Museum¹—by their freedom from caricature and their serious treatment. Consequently this gem can scarcely be a prophylactic, since for such a purpose an ugly thing derives additional merit by added ugliness. Moreover the negress with her graceful veil, reminiscent of the veil on the coins of Arsinoe and of Berenice,² has almost a queenly appearance.

I am indebted to Mr. A. B. Cook³ for the suggestion that conceivably some negro princeling had the gem carved by a Greek artist as a representation of himself and his family. If we carry this hypothesis a step farther a possible explanation suggests itself. It has already been pointed out that the most important of the three heads—the one to which the artist has devoted the greatest care and for which he has selected the best part of the stone—is that of the negress. Is she a negro queen whom the artist has modelled upon the great queens—dead but deified and still worshipped—Arsinoe and Berenice of Egypt? Is she, in fact, the Queen of Meroë accompanied by her consort and her son?

Until recently our information about Meroïtic rulers was scanty, gleaned from scattered references in the classics. The

¹ This head—No. 268—is described *B. M. Guide Grk. and Rom. Antiq.* 1908, p. 154, as "portrait head of an African." He is not a pure negro but rather a Libyan with slight negroid characteristics.

² *B. M. C. Ptolemies*, pls. VIII, XIII.

³ I take this opportunity of expressing my thanks to Mr. Cook for much valuable information and assistance.

indigenous population of the country was largely negroid,¹ and upon this population was imposed in the reign of Psammetichus I a ruling caste of Egyptian warriors. Herodotus (II, 29-30) tells a story in which he emphasizes the point that these mutinous soldiers migrated to Meroë with the purpose of finding wives among the natives as well as of settling in the country: Τῶν δὲ τινα λέγεται δείξαντα τὸ αἰδοῖον εἰπεῖν, ἔνθα ἂν τοῦτο ᾗ, ἔσεσθαι αὐτοῖσι ἐνθαῦτα καὶ τέκνα καὶ γυναῖκας. The classical authors give us the names of three rulers of the country: Ergamenes,² king of Meroë, who was brought up in the court of Ptolemy Philadelphus (Diodorus, III, 6); Candace, queen of Meroë, who in 22 B.C. invaded Egypt, and against whom Augustus sent a punitive expedition under Petronius; Candace, queen of Meroë at the time when Nero sent a mission to discover the source of the Nile (Strabo, XVII, 1, 54: Dion Cass., LIV, 5, 4-6: Pliny, H. N., VI, 29, 181-186), probably the same queen³ whose eunuch was converted to Christianity by Philip (Acts, VIII, 27). Strabo tells us that the people of Meroë were governed by a queen (XVI, 4, 8, βασιλείονται δ' ὑπὸ γυναικός, ὅφ' ἦν ἔστι καὶ ἡ Μερὸς) and it has been presumed that these queens all bore the title of Candace.

A great advance in our knowledge of this offshoot of Egyptian civilization has, however, been made by the discoveries of Professor Garstang in 1910 which are so ably set out in his book *Meroë, the City of the Ethiopians*, and his work confirms and amplifies what has been recorded by Dr. Wallis Budge in his *Egyptian Sudan*.

Various opinions have been expressed⁴ as to the prevalence of negro blood in the race of the kings and queens of Meroë, but a glance at the illustrations of some of these personages⁵ is sufficient

¹ Erman (transl. Tirard), *Life in Ancient Egypt*, 1894, p. 501; and Wallis Budge, *Egyptian Sudan*, 1907, II, p. 413.

² Ark-Amon on the monuments; Garstang, *Meroë the City of the Ethiopians*, p. 4.

³ *Op. cit.* Introd., p. 3.

⁴ Garstang himself expresses no opinion as to the negroid characteristics of the Meroites, but his co-author, Professor Sayce, believes (*op. cit.* Introd., p. 4) that the monuments prove definitely that the Ethiopians had no negro blood in their veins, disagreeing with Dr. Budge, who calls the same monuments to witness that strong negroid characteristics do appear in the faces and figures of many of the kings and queens of Meroë (*Egyptian Sudan*, I, pp. 407, 411; II, p. 135).

⁵ Budge, *op. cit.* I, pp. 375, 403, 409; II, pp. 121, 125, 127.

to convince one that negroid characteristics are by no means rare. Generally speaking these traits are much more marked in the women, who often appear as steatopygous negresses dressed in Egyptian garb, while the men of the ruling caste are at times thick-lipped and woolly-haired, and at times resemble their Egyptian ancestors. In this we have surely a strong confirmation of Herodotus' pointed story about the mutinous soldiers of Psammetichus I. Painted monuments were lacking before 1910, but a most important discovery of Garstang's in the temple of Isis at Meroë—a discovery the interest of which seems, in this connection to have escaped his notice—once again confirms Herodotus. Garstang found two great columnar statues of an Ethiopian king and queen,¹ the former painted red, the latter black.

Meroïtic art is an echo of the conventional hieratic art of Egypt which regularly paints the flesh of men red and the flesh of women pale yellow. Yet here we have the king painted red like any male Egyptian, and the queen black like a negress. Her head too, which is illustrated in *Meroë*, pl. XVIII, 3, is, though conventionalized, clearly that of a negress with high cheek-bones and thick lips.

The question now arises whether it is possible to identify our negro queen carved in agate with any Meroïtic queen depicted on the monuments: and here we may pause to note four points about this agate; first, that the heads—and particularly that of the queen—are negroid; secondly, that the king is a bearded negro; thirdly, that the young "prince" is beardless; and lastly the curious shape of the three-headed gem suggesting some triple-headed deity.

Figure 6 shows the heads of four personages² carved, in the order in which they are here printed, on the west wall of the temple of the Lion-god (Temple A) at Naga in the "island of Meroë." Allowing for the difference between Meroïtic art—an offshoot of late Egyptian—and Greek art of the first centuries before and after Christ, it would seem that these four figures may well be compared with our gem.

¹ Garstang, *Meroë*, pl. XVIII, 1, 2, 3, p. 19. The queen is now in the Royal Scottish Museum, Edinburgh, and Mr. Curle, the Director, informs me that she is painted black, with traces of red pigment on the armlets and the undergarment.

² After Lepsius, *Denkm.*, Abth. v, Bl. 59, and Budge, *op. cit.* II, Plate facing p. 144. The Lion-god's name was Apezemak; cf. Garstang, *op. cit.* p. 63.



A



B



C



D

FIGURE 6.—RELIEFS FROM TEMPLE A AT NAGA (MEROË): A, QUEEN; B, LION-GOD; C, KING; D, PRINCE.

The queen (Fig. 6, A) on the temple at Naga wears the headdress of the queen of Egypt. The Greek gem-engraver was most familiar with the headdress of the queen of Egypt as worn by the descendants of Arsinoë—the flowing veil. The queen at Naga, thickset and large-hipped,¹ is a negress as she is on the agate.

¹ Cf. other reliefs portraying her figure, Budge, *op. cit.* II, pp. 125, 127.

The king (Fig. 6, c) "is clearly of negro origin" (Budge, *loc. cit.* II, p. 134) and is bearded like the king on our agate. The "prince," (Fig. 6, d) on this and other monuments of the same Meroitic dynasty, is the regular companion of the queen and king as he is on our agate.¹

Most remarkable of all, however, it is to find these three royal personages worshipping a three-headed deity (Fig. 6, b)—the Lion-god of the Meroites whose other temple was excavated in 1910. In ancient Egypt the king was an incarnation of the deity, and this belief prevailed in Meroë with even greater force than in Egypt, Diodorus (III, 5; τοῦτον τὸ πλῆθος αἰρεῖται βασιλέα· εἰθὺς δὲ καὶ προσκυνεῖ καὶ τιμᾷ καθάπερ θεόν) making a special reference to the worship of the royal house by the Ethiopians. On a temple at Messawrat—of later date than temple A at Naga from which the reliefs come—is a set of curious carvings depicting in three cases leonine monsters, and in one case a winged lioness, toying with prostrate captives. "In these scenes the lion probably typifies the king. . . . The lioness probably symbolizes the queen" (Budge, *loc. cit.* II, pp. 149–150). Obviously the chief members of the royal house were thought of as incarnations of the three-headed Lion-god, and the artist has conveyed this idea in the agate.

According to the latest readings of the hieroglyphics the three personages on the temple are Queen Amanitêre, King Natikamani, and prince (?) Arik-kharêr.² Probably all the queens who bore this name also bore the name of Candace; while the Amanitêre of the temple has been identified with the Candace who rebelled against Augustus in 22 B.C.³ But for the fact that Meroë was not in so flourishing a condition in the first century of our era that great temples would be erected, she might almost as well be identified with the Candace⁴ whom Nero's

¹ Griffiths (Garstang, *Meroë*, p. 61) remarks upon this curious circumstance, "It would be interesting to know why a third personage is so often represented along with the king and queen on Meroitic temples. . . . Some considerations point to his being the son and heir of the king, while it would be reasonable also to suggest that he is an eponymous prince or priest distinguishing the members of a dynasty of homonymous kings and queens like the Ptolemies and Cleopatras of Egypt."

² Garstang, *op. cit.* p. 61. The same royal names appear on inscriptions at Wad-Ben-Naga, Amâra, Naga, Meroë, and in one of the pyramids.

³ Budge, *op. cit.* II, p. 169.

⁴ One of these two Candaces may, in Prof. Sayce's opinion, be identified with the Kantakit buried in one of the pyramids of Meroë.

Commissioners visited and who is mentioned in the Acts of the Apostles.

Whether she be the Candace of 22 B.C. or of 54 A.D., our agate seems to depict the same queen—accompanied by King Natakamani and by Arik-kharêr—as she who is carved on the temple at Naga. A Graeco-Egyptian gem-engraver¹ has shown his skill in portraying her black, like the black queen found in the temple of Isis at Meroë, while the gem has a curious connection with the local religion in that the artist has suggested the three-headed Lion-god in his treatment of the three royalties who impersonate the god on earth.

Whichever of the two historical Candaces this negro queen may be, she forms an effective contrast to the hideous negress, Lamia, on our Attic fifth-century oenochoë.

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¹ A cameo was discovered by Garstang, near the sanctuary of Amon at Meroë, made of glass paste (*Meroë*, pl. X, 3); also a Graeco-Roman bronze statuette of Eros (pl. XVIII, 5).

ARCHAIC ANTEFIXES FROM CERVETRI IN THE UNIVERSITY MUSEUM, PHILADELPHIA, PA.

THE antefixes, which are described in this brief paper, were acquired by the University Museum in 1897, together with a large number of shell antefixes of later type, from the same site and from Corneto, which I hope to publish in a later paper. Although antefixes of this type have been long known and often published, it is my desire here to call attention to the large amount of material existing for study in American museums, particularly those of Philadelphia and New York.¹

In 1869, there was discovered at Cervetri (the ancient Cære) a large number of remains proving the existence of an important temple. Unfortunately for the science of archaeology, the excavation which unearthed these remains seems to have been what is sometimes called an "illicit dig," i.e. an excavation conducted by and for dealers, and without the knowledge of the government.²

Partly for this reason, and partly because less attention was paid to such things then than now, no evidence is obtainable either as to the ground-plan of the temple or as to its size, save that offered by the objects found. Of these last there was a great number, which are now for the most part in the following five museums: (1) the Antiquarium at Berlin; (2) the British Museum; (3) the Glyptothek Ny-Carlsberg at Copenhagen; (4) the Metropolitan Museum in New York; and (5) the

¹ Through the courtesy of the authorities of the Metropolitan Museum in New York, especially Miss G. M. A. Richter, who very kindly sent me photographs of all the specimens in the Museum, I am permitted to refer to examples in that collection which correspond to those in the University Museum.

² These excavations are said to have been conducted by Jacobini: see *Mon. dell' Inst. Suppl.* text, p. 1. As this excavation was conducted before the occupation of Rome by the Italians, and therefore while Cervetri was still within Papal jurisdiction, it is likely that the rules at that time regarding excavations were less severe than they later became.

University Museum in Philadelphia.¹ There may be a few also at the Museo Artistico Industriale in Rome.² Those in New York and Philadelphia were obtained in Rome in 1897 by Professor A. L. Frothingham of Princeton University, who was then Acting Director of the newly established American School of Classical Studies in Rome,³ and were divided by him into two parts, the larger of which came to Philadelphia.⁴

An antefix, as is well known, is the ornament at the ending of the row of cover-tiles along the eaves of a temple or other building to conceal the joining of the roof tiles. Many of the antefixes in Philadelphia have portions, often quite considerable, of the cover-tile at the back.

These antefixes, as would be expected in an Etruscan temple, are of terracotta. It has for a long time been well known that the Etruscans were great users of terracotta for decorative purposes, as well as for the protection of the exterior parts of their buildings; for the great number of Etruscan temples and public edifices were of wood, and a terracotta revetment, or covering, not only concealed the unsightly structural members, consisting, as they did, of more or less rough-hewn beams, but protected them from the effects of the weather.⁵ Moreover, terracotta is cheap, and, if broken, can easily be replaced. There seems to be evidence from the different styles of the figures used in this temple, as shown by an examination of the objects in the five museums already mentioned, that several such replacings,

¹ Berlin acquired a large number of these antefixes almost immediately on their discovery; see *Arch. Zeit.* 1870, p. 123. 'Terracotten von Cervetri.' From this it appears that twenty archaic antefixes were acquired at this time, and four of the later shell antefixes. The others seem to have remained in the hands of dealers for the next twenty-five years, Copenhagen and the British Museum obtaining theirs in 1893, and New York and Philadelphia theirs in 1897.

² This is doubtful, but a terra-cotta frieze relief from this site is preserved in that Museum, published *Mon. dell' Inst. Suppl.*, pl. I, and described, *ibid.* text, p. 1; and the antefixes published *ibid.* pls. II and III may also be in that Museum, although there is no definite statement as to this in the description on pp. 1 and 2. Archaic antefixes of the types described in this paper are illustrated (very badly) on pls. II, 4, 4a, and III, 4, 4a, and 5, 5a.

³ Now the School of Classical Studies of the American Academy in Rome.

⁴ As far as is known, the objects to be described here have not been published before.

⁵ Revetments of this sort, of which the University Museum is fortunate in possessing a large collection, were published by the writer and Mr. Leicester Bodine Holland in *A. J. A.* XXII, 1918, pp. 319-339.

or even rebuildings, took place. It may be, of course, that there was more than one temple on the site where these remains were found, but the evidence points the other way.

All of the antefixes covered by this paper seem to belong in the sixth century B.C. The latest ones may possibly be of the early fifth century, and there is a possibility that the earliest ones may antedate the sixth century; but it is probable that the whole collection should be considered as of sixth century workmanship.

The earliest ones in this group are those which are numbered 245A and 245B.¹ Figures 1 and 2, which are taken from No. 245B, show the type. Here the head is very small, being no higher or wider than the tile itself, and forming merely a species



FIGURE 1.—ETRUSCAN ANTEFIX, 245 B.

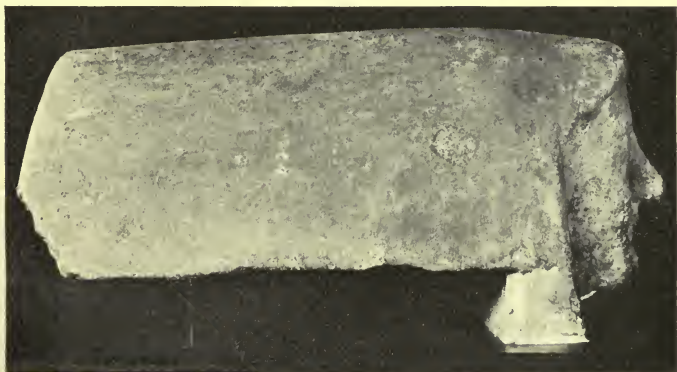


FIGURE 2.—ETRUSCAN ANTEFIX, 245 B: PROFILE.

of cap for the cover-tile. This is clearly shown in Figure 2, which shows a large part of the tile still preserved. There are two examples like these in the Metropolitan Museum in New York,

¹ The numbers are those attached to the specimens in the cases; the inventory numbers are MS1808 and MS1815.

which are there numbered GR1032 and GR1033. Of these, GR1032 is exactly similar to Philadelphia 245B, while GR1033 corresponds to 245A. Though there are minor differences which make 245A a distinct type from 245B, it is, nevertheless, permissible to group them together, as they are of the same size and period, and probably from the same building. Of the two, 245A is in a very fragmentary state, most of what appears at present being restored. At first it was thought that it might be hand modelled, but on closer examination, and on comparison with the parallel example in New York, it seems clear that there is not



FIGURE 3.—ETRUSCAN ANTEFIX.

sufficient evidence to prove this. In the case of 245B, on the other hand, nearly everything is preserved (Figs. 1 and 2), only a little at the bottom being added, and that of minor importance, and indisputably correct in detail. It is obviously made in a mould.¹

These early antefixes, which seem to belong in the first half of the sixth century B.C., if not earlier, bear no trace of painted decoration or ornament; in fact, the use of paint and of a slip marks the second period in the development of this form of architectural terracotta embellishment. Furthermore, the extremely archaic manner of the figures should be noted, with the rough, unskilled treatment of the hair, and the "Egyptianizing" headdress. The smile, characteristic of the archaic sculpture of Greece, is to be found on these heads from Etruria, as well as the wide, expressionless stare of the eyes.

Next in order comes a pair,² one of which is illustrated in Figure

¹ An antefix of this type is published in *Mon. dell' Inst. Suppl.*, pl. III, 4, 4a. As stated above, it may be in the Museo Artistico Industriale at Rome.

² Not exhibited. Inventory numbers MS1809 and MS1812.

3. A fragment closely resembling this pair is in New York (No. GR1035). These resemble 245A and 245B, but the faces are larger, and the execution better. The hair is parted in the middle, and roughly treated, though better than in the earlier specimens. The features are much more sharply defined, and the "archaic smile" is less pronounced. The size of the heads is greater, being the same as in the later examples.

Polychrome ornament was clearly employed in this pair, for traces of color in details can be distinguished, principally black. A thin, cream-colored slip was first laid on over the reddish clay, and the colors applied on this slip. The preservation of this pair of antefixes, unfortunately, is poor, and much has been restored. The correctness of the restoration of some details can be questioned.

The next type to be noticed is the specimen numbered 246 (Inv. No. MS1810. Fig. 4). A similar figure, numbered GR1028, is to be found in New York. The fragment in Philadelphia is in very poor preservation, the one in New York being more complete. From the specimen in the Metropolitan Museum the disc-like earrings were restored.¹



FIGURE 4.—ETRUSCAN ANTEFIX, 246.

The head shows a slight advance in technical skill. The hair is arranged in a formal manner, parted in the middle, and then neatly crimped in waves. The ears and earrings too show a certain advance in skill; but behind the ears the "Egyptianizing" locks hang down along the neck. Faint traces exist, which point to the presence of a white slip, with possibly polychrome decoration; but not enough is preserved to prove what the nature of the

¹ I am informed by Miss Gisela M. A. Richter, that one of these earrings is original on the New York specimen, and the other restored. The antefix published in *Mon. dell' Inst. Suppl.* pl. III, 5, 5a, appears to be of this type, but the drawing is so poor that it is impossible to state this with accuracy. As previously indicated, this antefix may be in Rome.



FIGURE 5.—ETRUSCAN ANTEFIX, 247.

exists at the back (Fig. 6). The features are sharply defined, the face firm, and coming to a point at the chin. The eyes slope

decoration may have been. The expression of the features is still archaic. This specimen should be dated somewhat after the middle of the sixth century B.C.

The next antefix to be considered, No. 247 (Inv. No. MS1811. Fig. 5), is a most interesting type. There are none resembling it in New York, but a published example identical with it is preserved in Copenhagen.¹ A large fragment of the cover-tile



FIGURE 6.—ETRUSCAN ANTEFIX, 247: PROFILE.

inward toward the nose, and the "archaic smile" is very noticeable. The hair, parted in the centre, is dressed in very pro-

¹ See Wiegand, *Glyptothek Ny-Carlsberg*, text, p. 27, pl. 175, 2, 2b.

nounced waves along the forehead to the ears, which are set very high. Below them falls the "Egyptianizing" head-dress common to all these early specimens. There are no earrings. A great deal has been restored in plaster, but the restoration is correct. For details polychrome decoration seems to have been employed. This is a striking example of sixth century Etruscan workmanship.

Of the four types above mentioned, besides those in Philadelphia, New York, and Copenhagen, there are thirteen examples in Berlin, of which seven have polychrome decoration,¹ but it is impossible for me to assign these correctly to the groups to which they belong, as no adequate description of them is available.

Of the next class to be considered (Figs. 7, 8), twelve examples are known to me, divided among the five museums as follows: seven in Berlin,² two in Philadelphia, one in Copenhagen,³ one in the British Museum,⁴ and one in New



FIGURE 7.—ETRUSCAN ANTEFIX, 248 A.

¹ *Arch. Zeit.* 1870, p. 123, 'Terracotten von Cervetri,' 4.

² *Arch. Zeit.*, l. c., 3. Two of these are published by Wiegand, *Glyptothek Ny-Carlsberg*, text, p. 28, figs. 40, 41.

³ Published by Wiegand, l. c., pl. 175, 1, (in colors).

⁴ *Catalogue of Terracottas*, No. B624, p. 175. I quote the description, as minor differences appear which are worthy of mention. "Female mask, from antefix. The hair is parted and neatly crimped in waves, and falls (indicated by vertical black lines) on either side of the neck; in the ears are large disc-shaped earrings, and on the head a large erect myrtle-wreath. The face is covered with a pale buff slip; the lips and hair are red, the eyelids

York (GR1031).¹ This type is, therefore, the commonest of any single type of archaic antefix that has been found at Cervetri.

The two in the University Museum are numbered 248A and 248B (Inv. Nos. MS1813, MS1814). The illustrations are of 248A, the better preserved of the two, on which only the point



FIGURE 8.—ETRUSCAN ANTEFIX, 248 A: PROFILE.

of the chin and the "Egyptianizing" headdress back of the ears have been restored. A large part of the original cover-tile remains at the back, as the profile view shows (Fig. 8).

In their original state, these antefixes must have been very brilliant. Red, yellowish brown, buff, white, black, blue, and

and eyebrows black, and the pupils of the eyes green; the earrings have black markings on a red ground, and the wreath is green on a black ground. The eyes slope strongly inwards." The italics are mine.

¹ Besides the twelve antefixes here enumerated, an antefix published *Mon. dell' Inst., Suppl.*, pl. II, 4, 4a, should, perhaps, be considered as distinct from these, and, as previously indicated, may possibly be in Rome.

green appear on the different examples, put on over a buff slip. The hair is sometimes rendered in yellowish brown, as in 248A, sometimes in black, as in 248B; in the example in the British Museum it is red, according to the description in the Catalogue just cited. The diadem has various forms of decoration, sometimes a palmette-lotus pattern, sometimes a garland of leaves, sometimes rays. The flesh is in white or buff, and details are rendered in appropriate colors, the lips being red, the eyes either blue, green, or brown.

In No. 248A, the flesh seems to have been rendered originally in white overcolor; but this has largely disappeared as has nearly all the color for details of the features, leaving the buff slip. In No. 248B, however, all this is fairly well preserved. In both cases the eyes seem to have been blue. The hair is dressed in much the same manner as in the examples described earlier in this paper, being parted in the middle, and crimped in neat waves along the forehead. This form of dressing the hair is employed in all of this type. As has been mentioned above, it is yellowish brown in 248A, with lines of black to indicate waves; in 248B, it is all black.

The principal feature of this type is the erect diadem which is worn above the crimped waves of hair. As has been pointed out in a former paragraph, these diadems have various forms of decoration. In 248A, it seems to have had a conventionalized plant design, in red, yellowish brown, and black; but so little of the decoration is preserved that it is impossible to say just what form the pattern took. In 248B, the design is of the nature of a ray pattern, in red and black on a light buff ground.

In the ears are disc-like earrings, preserved in 248A, restored in 248B, similar to those in the type of 246.

The archaic manner proves this group to belong in the late sixth century B.C. The "archaic smile," it is true, is, to a certain extent, modified; but the eyes, with their pronounced slope toward the nose, and their almond shape, and the persistence of the "Egyptianizing" headdress point to this type being of the archaic period.

These, then, represent the antefixes of the early period of the temple at Cervetri. In a later article, the second period will be

discussed, with the great shell antefixes, which mark the Etruscan work of the fifth and fourth centuries B.C.¹

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¹ For many suggestions and much help, I am indebted to the following persons: First of all, to my colleague and friend, Mr. Leicester B. Holland of the University of Pennsylvania, who has collaborated with me in the study of Etruscan architectural terracotta decoration; then to Miss Gisela M. A. Richter, of the Metropolitan Museum in New York, who has supplied me with photographs and much valuable information regarding the examples in that Museum; to Dr. Lacey D. Caskey, of the Museum of Fine Arts in Boston, in whose office I wrote this paper in its final form; and to Dr. J. M. Paton, the Editor of this JOURNAL, with whom I talked over various points, and from whom I have received much helpful advice.

THE THEORY OF GOTHIC ARCHITECTURE AND THE EFFECT OF SHELLFIRE AT RHEIMS AND SOISSONS

I

THE PROBLEMS IN THE THEORY OF GOTHIC

To the student who makes a careful review of the present writers on Gothic, it is evident that there is a considerable divergence of opinion among them. This divergence is not only in regard to its origin and its historical development, about which there must always be differing theories, nor in the limitation of the term to a greater or less number of buildings and provinces, but it is a variance in the theory of the determining principles themselves and of the main features of the buildings. Apparently the theory of Gothic is still undergoing modifications, in spite of the serious works of several authors who have endeavored to present a comprehensive and final view of it. To collect these views in some orderly arrangement, with an attempt to give them the relative importance that the opinion of the majority seems to agree upon, may well be our first step in establishing a working basis for our observations and criticism. In so doing we shall bring out the various points in dispute and see clearly for what we must search in the ruined monuments.

At the outset, a distinction should be made, which is often overlooked, between the determining principles and the forms or architectural features of the buildings. To illustrate, the concentration of supports is a principle, a pier is an architectural form; or, to take a case more frequently confused, the transmission of thrust is a principle, but the flying arch is not, being merely a device of construction or "flying buttress." In this connection, too, it may be noted that the principles are few, but the forms through which they were expressed are many.

I. Of all the principles involved in the conception and execution of a typically Gothic work, the one most generally emphasized

is that of logic in construction. According to Viollet-le-Duc, the great early exponent of Gothic, this was its chief underlying idea, almost to the exclusion of others. For him the historical development of perfected Gothic was dictated by logic throughout and it was in obedience to close reasoning along constructional lines that each great cathedral was designed. This view has been developed to an even greater extent by the American writers, who have largely formed the theory as we know it today. Professor Moore, Mr. A. Kingsley Porter, and Professor Frothingham in their very extensive studies of the subject have applied this idea to nearly all parts of the building and have insisted on it with the greatest positiveness. Even the latest English writers who have treated French Gothic, Jackson and Simpson, have taken the same stand.

On the other hand, there seems to be somewhat of a reaction against too much emphasis on logic as the governing factor. The French writers, who, after all should have some hearing on such a subject, and who are, by race at least, inclined to be logical themselves, while assigning to logic the principal rôle, yet take pains to show that the Gothic cathedral is in some respects not logical in fact, whether it was so in intent or not. Thus, one of them, Brutails,¹ insists that the originator of this theory, Viollet-le-Duc himself, was very prone to *a priori* reasoning, with a reckless treatment of facts in support of his hypothesis, and that "logic" with him was almost an obsession in his later years. Viollet-le-Duc has also been found to be mistaken in regard to the communal or civic character of the motive that produced the cathedrals. Mr. Porter has shown with great thoroughness that they were entirely ecclesiastical in their origin. M. Guadet, an architect as well as a profound student of all architecture, considers the whole system of abutment of the vault thrusts as merely one of two possible solutions, the other being the tie rod used in Italian Gothic.² He raises the point whether the French system, the flying arch and buttress, being more uncertain and less economical, is indeed as logical.

M. Enlart, one of the greatest French authorities on Gothic, in his study on the cathedral of Rheims³ considers that here rig-

¹ Brutails, *L'Archéologie du Moyen Âge*, p. 181.

² Guadet, *Elements et Théorie de l'Architecture*, II, p. 307.

³ Enlart, *La Cathédrale de Reims* (Special No. of *L'Art et Les Artistes*, 1915), p. 23.

orous logic was secondary to beauty of form, notably in the flying arches, of which the upper tier is without use, even as a conductor for rainwater.

Among the architects, as contrasted to the archaeologists, Mr. R. A. Cram, one of the greatest American designers as well as students of Gothic, asserts¹ that the informing principle in the twelfth century was a love of beauty, whereas logic, later obtaining the upper hand as in Amiens, produced only inferior buildings. Professor Hamlin, who in his *History*, first published in 1897, considered² that principles "of structural stability and propriety controlled the development throughout," in his latest analysis³ maintains very strongly his belief that the part of logic has been over-emphasized and that in fact it was secondary to the esthetic considerations, especially after the formative stages of the style had been passed.

Here, then, is a difference of emphasis amounting to a real divergence of opinion in the most fundamental principle, at the very outset of the whole definition of Gothic, a difference inviting us to possible elucidation and discussion.

II. Another underlying principle that is given an almost equal importance and that, if true, marks off the style absolutely from all others except the immediately preceding stages of later Romanesque, is what has been called its *dynamic* quality. In the phrase of one of the latest exponents, it was the first time in architectural history, that a living force was set in motion to overcome and neutralize the action of another living force, as contrasted with an architecture based on inert resistance. "The laws of beauty were subordinated to the laws of scientific life . . . and so a Gothic building became a living organism."⁴ How far this conception has been carried may be seen from another well-known author, an Englishman, but a great lover of French Gothic and a beautiful draftsman of many of its buildings, who speaks⁵ of "the mighty unseen forces engaged in fierce combat."

This quality is usually insisted upon in the definitions of Gothic, and no wonder. It is striking to a degree, novel to the general reader, and fascinating in its appeal to the imagination. And

¹ R. A. Cram, *Heart of Europe*, pp. 110-111.

² Hamlin, *History of Architecture*, 1897, p. 193.

³ Hamlin, *Arch. Rec.* XL, 1916, pp. 110-112.

⁴ Sturgis and Frothingham, *History of Architecture*, III, p. xxix.

⁵ T. C. Jackson, *Reason in Architecture*, pp. 126-127.

yet when one looks for the concrete applications of this principle, so striking to the layman, but suspicious to the architect, he finds it limited principally to the flying arch and buttress. There is a feeling in the reader's mind that there is also somehow a balance of one groin vault against another, of the chevet vaults against the last vault of the nave, or of one aisle arch against another; but there is a great lack of definiteness. Even in the case of the flying arch itself, there is considerable confusion, some authors giving the impression that it exerts a thrust to counter-balance the thrust of the vault inside the wall. Some like Hamlin and Guadet state that it only *transmits* the vault thrust to the buttress, acting as a strut, while others like Moore and Jackson call it a prop, but consider that in this feature "the equilibrium by opposing thrusts is completely developed."¹

Now, here is a perfectly definite issue. Does the flying arch exert a push against the vault or is it a pure strut, that is a slanting post which receives the outward push of the vault at one end and transmits it to the buttress at the other? In the latter case, there is no balance of thrusts but merely a thrust on a column, and the principle of the opposing thrusts, deprived of its leading application, must be circumscribed. Here again we may well look to find some light on the true state of affairs from the ruined buildings themselves.

In the other applications of this principle, the issue is less definite. Hamlin in his latest writing, however, says² "the only balanced thrusts are really those of adjacent pier arches and wall arches and transverse vaults, which do thus balance each other." The last statement might seem to be possible of immediate acceptance, but just how far all this actually corresponds to the construction may also be developed by a study of the parts that have stood in the ruined churches where the adjoining parts have been destroyed.

III. The next principle in importance is that of the highly organized framework, or skeleton, consisting primarily of ribs, piers, flying arches, and buttresses. This is excellently stated by Mr. Moore in his summary of Viollet-le-Duc's theory, in which he describes it³ as a system whose distinctive characteristic is "that

¹ C. H. Moore, *Development and Character of Gothic Architecture*, p. 112; see also p. 8 and p. 20, § 5.

² *Arch. Rec.* XL, 1916, p. 109.

³ Moore; p. 8.

the whole scheme of the building is determined by, and its whole strength is made to reside in, a finely organized and frankly confessed framework, rather than in walls. This framework, made up of piers, arches, and buttresses, is freed from every unnecessary encumbrance of wall, and is rendered as light in all its parts as is compatible with strength." This part of the definition is generally agreed upon by all writers and emphasized. We may therefore consider it as the undisputed foundation of the theory and search the monuments for its confirmation.

IV. The next general principle is that of conscious revelation of structure. As Frothingham puts it¹ "every structural element was frankly shown." Mr. Moore states it as broadly also and adds: "We see at a glance that the building is not composed of walls and timber roofs, but that it consists of vaulting sustained by piers and buttresses. . . . In the frank exhibition of each functional member, and the artistic skill with which all are shaped and adjusted with regard to their effect in the mighty whole, reside largely the peculiar impressiveness of the Gothic cathedral."²

On the other hand, we find Professor Hamlin bringing out the fact that in certain respects this expression of function did not correspond to the fact;³ "for the vaulting shafts *do not completely carry the vaulting* they only appear to do so." M. Guadet⁴ questions whether this system of abutment in which the interior vaults are sustained by exterior struts, unsuspected on the interior, is not really less expressive of structure than that of some other styles. Further, he and M. Enlart consider the upper arch of the double flying arches of no structural use, as we have already mentioned, thus apparently denying the principle in one of its most significant features. The façades also have often been criticised as not expressing the real structure of the building. Mr. Moore hardly makes his point when he argues that "the façade is merely a storied edifice in which the structural principles peculiar to Gothic are not extensively called into requisition,"⁵ for the question is rather whether the structure of the nave is expressed by this exterior.

¹ Sturgis and Frothingham, III, p. 10.

² Moore, p. 187.

³ Hamlin, *Arch. Rec.* XL, 1916, p. 110.

⁴ Guadet, II, p. 330.

⁵ Moore, p. 178.

There are, of course, many large features of the cathedral in which this revelation of structure holds good, but from the point of view of design the full discussion of this principle is second to none in interest. Enough has been said to indicate that there is distinctly a controversy here, and, as it involves the actual construction, it is one on which one may well hope to find further information after examining the churches laid bare by the recent destruction.

V. One more principle should be included in the theory, that of lightness of construction, as evidenced by the reduction of the piers, the thinness of the vaults, the flying arch and buttress systems, and practically all other parts. This guiding principle is very generally agreed on, the differences being as to its source, whether in "logic," or economy, or sheer virtuosity in constructive technique, or in some more concrete conditions, such as the necessity to reduce the piers on account of the worshippers,—or finally as a part of the Gothic ideal of beauty in design. The outstanding instance of this principle or tendency was the reduction of the wall space in the clerestory and in the aisle or chapel wall, until this became entirely a glazed opening. The result had the greatest effect upon the whole interior aspect, but which of the above causes was responsible for it is again a matter of differing opinion. In all of these cases, the explanations vary according to the different points of view of the authors that we have already mentioned. Though we may not hope to find any confirmation of such non-material causes in our search, we may be led to make certain modifications in our theory which will throw new light on this point also.

We have now reviewed the various broad principles which form the basis of the theory, and the questions in dispute about each.

There is the principle, generally accepted, of the organized framework. Are there important parts in the nave at least, which are other than framework, and how far does this framework correspond to the theory?

There is the question of "logic." Was it the supreme controlling factor or was it secondary to the *appearance* of logic and to purely esthetic considerations in determining the designs?

There is the question of "balanced thrusts." Is there a thrust exerted by the flying arch against the vault, by one vault compartment against another, and by the pier arches or wall arches against each other?

There is the question of "revelation of structure." How much of such structure apparently revealed is real structure? Is there other structure which is not revealed?

There is finally the question of the tendency to extreme lightness of construction. Was it due to logic, or to necessity of one kind or another, or to esthetic reasons?

So much for the statement of the principles. We now come to the leading *features* of Gothic construction, which are usually enumerated as follows, differing somewhat in order of importance according to the different authorities: The vault, with its ribs and cells; the pointed arch used for the ribs and all the openings; the flying arch and buttress, with its pinnacles; the pier with its clustered shafts; the height of the nave; the suppression of the wall; the stained glass windows; the sculpture. Concerning these features there are still many questions upon which critics differ. Such as relate to historical development and dates of construction can hardly be treated here. Though it is quite possible that a careful study of so many monuments as now have their inner structure exposed will lead to important results, yet this study can only be properly carried out on the spot, or at least with photographs of larger scale and more architectural intent than those now at hand. Those questions that relate to interdependence of parts, to the function of members, to their relative importance, to their structural or decorative quality, and to all parts that are ordinarily hidden from the eye, are however within the scope of our study, provided that they can be observed from the limited illustrations now available.

In regard to the ribbed vault, the last word is¹ that the ribs served primarily as centering, that their importance in supporting the vault after it was once erected has been "grossly exaggerated," and that probably the vaults would, in the majority of cases, stand without them, like plain groin vaults. In support of this are cited parts of the ruined vaulting of the abbey of Longpont already in ruins before the war. This is a departure from the former theory that the ribs actually supported a thin shell which filled in the spaces, and the weight of which was carried by them to the points of concentrated thrust.

Another important detail is that of the vault-conoid. This in its lower part is believed to be constructed of heavier stones and

¹ Porter, *Construction of Lombard and Gothic Vaults*, p. 16.

solidly filled, so that it acts as a solid member, together with the ribs at this point, in imparting the thrust to the flying arch and buttress. Evidently its character and function here are not the same as in the upper part. How far this is true is a question for which we may well search an answer in the ruined vaults.

As to the vault in general and its preëminent part in the whole scheme of the nave, how far was it indeed "the central fact," the feature which controlled the whole development of Gothic?

In regard to the pointed arch, the questions that may fall within our inquiry are those relating to its strength in comparison with the round arch, thus perhaps contributing to the solution of the problem as to how far its adoption was due to convenience in regulating the arch heights.

The flying arches and buttresses are naturally of very great interest. We have already seen the open questions that exist in regard to their part in the principle of balanced thrusts; namely, whether the buttress exerts a thrust on the vault or not, and in the principle of revelation of structure, where the assertion has been made that they rather belie than express it in their upper member.

The pier with its clustered shafts is usually treated as a typical instance of Gothic, each shaft being supposed to express its support of the weight from a section of the vault, which is discharged upon it by its corresponding rib. While it might be stretching the theory to take this with perfect literalness, yet this is certainly the impression usually left upon the student. The effects of shellfire upon these shafts, then, will be part of our investigation.

The questions of the minor importance of the wall, or even of its entire suppression and the reduction of the whole building to vaults, piers, and glass, as well as the question of the part played by the window openings in the development of the style,—a question generally considered settled in favor of the vault as the determining feature,—may seem to be beyond demonstration in this inquiry, but if we bear them in mind, we shall perhaps find some light on them also.

As to the sculpture, the questions in regard to it are of meaning rather than structure. Evidently the ruins can give us no light, but in passing, it may be said that the interest is more poignant here, for the loss is indeed irreparable. One may suppose that some of the construction will be rebuilt and that when time has softened and colored the rawness of the new, those churches

which are capable of reconstruction will resume something of their former aspect. But the sculptors and the spirit that animated them are gone, copies by artisans would never be the same, and in this, as in the glass, the churches must probably remain forever mutilated.

II

THE EVIDENCE OF THE RUINS

Before discussing in detail illustrations of the monuments, several general observations may be made. We have already spoken of the possibility of discovering more about the realities of the construction. But we may hope to learn not only from the broken portions, but also from those that are more or less hidden, such as the upper side of the vaults, the roof, and its relation to the wall or piers. Further, we shall see the structure in some cases somewhat as the builders saw it. Since the architects or master builders of those days lived on the works and the half-completed buildings must have entered into their conception far more than is the case with the architects of to-day, we, on finding ourselves in their position, may gain somewhat more of their point of view than by always reasoning backward from the finished church. May we not say, indeed, that only thus can we free ourselves from the tendency to see a logical reason for every feature, since the logical explanation is the most natural one for a scientifically-minded historian, archaeologist, or critic to seek? Of the many invisible paths that may have led to the visible result,—material difficulties, failures, caprices, survival of tradition, or strict logic,—is not that of logic the one most likely to be sought for, and its imaginary trail found by a reasoning, classifying generation.

Finally, the geometrical drawings in our books, especially the sections, taken as they usually are through the openings rather than through the pier, tend to be misleading. For instance, from them we readily assume that the vaulting conoid was largely solid with filling or that the flying-arch buttress was developed from the continuous abutting barrel vault of Romanesque work. This latter assumption is probably correct, though questioned, but it is certainly much favored by the similar appearance of the two features in the usual geometrical sections.

A question naturally arises at this point about the effects of shellfire in general upon such buildings as the Gothic churches. Broadly speaking, it may be said that the simplest, and rarest, effect is the piercing of a roof or vault by a projectile without explosion, for usually the explosion takes place at the point of contact. In case of a fracture or explosion, the flying or falling fragments may cause further destruction to anything around or below them. In addition to all this destruction there were, in some cases, incendiary shells, as at Rheims, where great numbers of such shells were fired upon the cathedral, causing the destruction of the roof and flèche by fire.¹

The direction of these projectiles was probably vertical in the case of air bombs and nearly so in the case of shells, which being of long range would drop nearly straight. Even a slight angle, however, or a shell-burst beside a wall or pier would give the impact a certain direction.

In addition to these effects, there is always the possibility of more than one hit producing the result that we see. At Soissons and Rheims, at least, we know from successive photographs in different years that the destruction was thus progressive.

From all this, it is clear that in such a welter of destruction as came upon some of these finely organized and delicate constructions one must be very cautious about saying *how* a given result happened; often the most that can be done is to note what parts are standing independently of others adjacent to them, and draw only such inferences as can be made from this. And even here, one should use judgment in ruling out the eccentricities of stability that are so often seen in the ruins of fires and explosions. For the purposes of indication as to the truth one may, I think, assume that the same case occurring twice is not such a mere eccentricity.

¹ It may be of interest to note that the fire of the scaffolding on a corner of the main façade was not the cause of the destruction of the roof, as is sometimes stated, for there were four other centres of the fire (*L'Art et les Artistes*, p. 44). Nor was it the cause of the burning straw inside, which caught from the shells (*Les Monuments français détruits par l'Allemagne*, p. 57).

TABLE OF FEATURES AND PRINCIPLES

RESULTS NOTED, BY "FEATURES"	ILLUSTRATIONS	PRINCIPLE, CONFIRMED OR NOT
1. Ribs carry vault and so concentrate its thrust.	Figs. 1a, 4b, 6c, 8, 17.	Logic, confirmed. Revelation of structure, confirmed.
2. Do not carry vault in lower portion.	Figs. 2b, 4c, 13 (2 holes).	Logic, contradicted. Revelation of structure, contradicted.
3. Diagonal ribs give more support to vault than others.	Figs. 1a, 2c, 5, 6abd.	Revelation of structure, contradicted. Balanced thrusts, confirmed.
4. Flying arch—no thrust on vault.	Fig. 2d.	Balanced thrusts, contradicted.
5. Flying arch—upper tier too high, slight value as abutting vault.	Figs. 2f (5 same).	Balanced thrusts, contradicted.
5a. Flying arch—upper tier broken.	Figs. 2d, 14a.	Same as 5.
6. Buttress pinnacle—very light.	Fig. 14.	"Pinnacle" theory, contradicted.
7. Vaults—adjacent nave compartments <i>not</i> interdependent.	Figs. 1c, 6a.	Balanced thrusts, contradicted.
8. Vaults—importance compared to wall has been exaggerated.	Figs. 2k, 18.	Theory contradicted.
9. Vaults—height of filling.	Figs. 2ce, 3b, 4a, 5, 6b.	Theory confirmed.
10. Vaults—this portion of conoid self-supporting, independent of ribs.	Figs. 2b, 5, 6b.	Revelation of structure, contradicted.
11. Level crowns.	Fig. 7.	Theory well illustrated.
12. Cells adjacent to diagonal rib not interdependent.	Figs. 1, 2c, 4c, 6d.	Balanced thrusts, contradicted.
13. Lightness of construction, Soissons.	Figs. 2c, 5, 6 def, 18.	Lightness, confirmed.
14. Thickness of vault construction, Rheims.	Fig. 13.	Lightness, contradicted.
15. Vaults independent of wall.	Figs. 2k, 4a, 18.	Mediaeval point of view.
16. Arches of clerestory not interdependent.	Figs. 2, 3, 5.	Balanced thrusts, contradicted.

RESULTS, NOTED BY "FEATURES"	ILLUSTRATIONS	PRINCIPLES, CONFIRMED OR NOT
16a. Pier shafts—not structurally essential.	Figs. 1f, 4d, 5.	Logic, contradicted. Revelation of structure, contradicted.
17. Wall—thinness.	Figs. 1d, 3c, 6 ef.	Lightness, confirmed.
18. Wall—importance, between clerestory windows.	Fig. 2k.	
19. Suppression of wall.	Fig. 1bc.	Theory confirmed.
20. Organized framework of structure.	Figs. 1e, 5, 6g.	Theory confirmed.
21. The roof: importance.	Figs. 2, 12.	Revelation of structure, contradicted.
22. Transverse wall under aisle roof.	Fig. 6h.	Revelation of structure, contradicted.
23. Parapet, decorative, its importance.	Figs. 7, 12.	Logic, contradicted.
24. Suppression of clerestory wall, decorative rather than logical.	Figs. 7, 12.	Logic, contradicted.
25. Tower at crossing, ¹ light, decorative.		Logic, contradicted.
26. Lack of correspondence, nave and façade.	Figs. 7, 8, 9, 10, 11.	Logic, contradicted.
27. Structure nearly complete without vaults.	Figs. 2, 19.	Mediaeval point of view.
28. Upper tier of flying arch hardly abuts vault filling.	Figs. 2def, 6e.	Mediaeval point of view.

Before beginning our discussion, it may be said that inasmuch as the theory is based on a few of the very greatest cathedrals and is especially exemplified by them,—although by most critics it is no longer limited to them,—we shall confine our evidence to what may be selected from ruins of that class.

Something indeed might be learned from the many smaller churches illustrated in "*Les Monuments*"² but the evidence is much scattered and many of the churches are of later date or from regions where Gothic was less perfectly developed.

As a matter of fact it was two of the greatest monuments, Rheims and Soissons, which underwent the most terrific bombardments, and it is from them that our evidence will be drawn.

¹ See Viollet-le-Duc's illustration of Rheims in the thirteenth century, Sturgis and Frothingham, III, p. 47.

² A. Alexandre, *Les Monuments français détruits par l'Allemagne*, Paris, 1918.

Laon, Amiens, Beauvais, all most fortunately remain intact. Noyon, Senlis, and scores of small churches are more or less destroyed. At present, illustrations of these are not available, but, valuable as the studies of them must be from the point of view of historical development, they can hardly have the bearing of this great pair on the fully developed theory.

At this point let us pause a moment for a further examination of the very interesting case shown in Figure 1. If we knew with any certainty where the shock or explosion had occurred that caused this wreck and in what succession the parts had fallen, we should be able to obtain much real light on the principles of Gothic. In fact, this seems to be the most important piece of ruin that we have in all the available illustrations. Let us then see what steps, if any, we may safely take in our inquiry.

In the first place, we may say that it was not merely the vault that was hit and carried the other parts down with it, for in Figure 2, we see that the vaults may fall without disturbing any of the rest of the structure.

If we assume that the lower tier of the flying arch, which as



FIGURE 1.—UPPER PART OF THE GREAT BREACH: SOISSONS.

is shown by Figure 2, is the essential one for the stability of the vault, was broken or indeed both tiers, *without the wall or pier being hit*, we assume a case of great interest, but of extremely small probability, for the hit would have to be right on the lower tier buttress or close beside it. Moreover we might expect to find



FIGURE 2.—THE NAVE: SOISSONS.

some "spatters" on the inner face of this buttress or the adjacent flying arches or buttresses, which do not appear (Figs. 1, 2, 3). The spatters on the left side of the buttress itself (Fig. 3) would hardly be caused by so direct a vertical hit. Again by our theory we should expect the vault to have burst outward, whereas the pile of débris (Figs. 4, 5) seems to indicate that everything fell vertically, the pile being greatest where there was most masonry

above it. So although one is at first tempted to say that here for once we have a case of the buttress being cut and the vault and pier bursting out and crashing down in consequence, we should be running counter to too many probabilities to have any real confidence in it.

If, however, we suppose that a shell in a somewhat slanting direction struck the vault of the aisle or the wall somewhere near the line of the pier at a height anywhere between the abacus and

the top of the triforium, we might perhaps get this result. The pier would fall inward, breaking off the flying arches and letting the vault down with it. The aisle vault might be broken by the shell, as shown in Figure 1, or by the falling buttress. The spatters might be diminished by the soft mattress-like aisle-roof (Fig. 6). The occasional spatters seen in Figure 1 on the inside might be caused by fragments from the débris as it struck. This hypothesis appears to satisfy the conditions found and still permits quite a range of possibilities for the shot itself.

It is unfortunate however that it seems to be the most likely, for if this was what happened, it gives us really no interesting light on our theory, except perhaps on the lightness of con-

struction and organization of the whole bay. The foregoing analysis however will serve to show how difficult it is to guess just how the different cases of collapse occurred and how unsafe it is to deduce much from that branch of our inquiry.

Having observed carefully the facts exposed in the illustrations of the ruins and having correlated them according to the features to which they belong and the principles involved, let us now return to the general theory of Gothic and its open questions



FIGURE 3.—NORTH SIDE OF THE CATHEDRAL:
SOISSONS.

(p. 42) and see how far the one is borne out by them and the others answered.

The strongest impression left by such a study of these churches is certainly that of their organized framework. The more their scheme is laid bare in these terrible sections, revealing interior and exterior together and all in perspective, the more we feel



FIGURE 4.—NAVE AND NORTH AISLE: SOISSONS.

their ingenious system, so different from the ruins of all other architecture. We see for instance a great buttress intact but severed from the body of the structure in as clean cut a division as that of an amputated limb (Fig. 1, e). We see a whole bay wiped out but the breakage lines following almost as closely the structural and architectural divisions as if it had been a vertebra (Figs. 1a, 3b, 5). We see indeed a more organic structure than we

had expected in that the vaults themselves have come away, leaving the walls clean (Fig. 2). In fact we are struck with wonder that masses of steel and the highest explosives could be hurled into this rich, almost fragile, network of stone and yet the destruction be so limited, so confined to units actually struck.

On further reflection, however, we come to realize that the framework revealed here is not altogether that of the theory.

We have been used to thinking of the structure as composed of vaults, piers, and buttresses but we now realize that the clerestory arches and the wall between them and, at Rheims, above them (Fig. 7), are also finely organized and quite as finely built (Fig. 2). We feel, in view of the ease with which the nave vaults can be stripped away, that this arched wall must be added to our statement of the frame.

Again, we see the façade as a great and massive structure quite capable of standing alone. In fact so nearly is it a complete composition in itself that it is hard to realize in looking at it from the rear that it is a façade and not a separate structure (Fig. 8). If we now look at another ruin near by, St. Jean des Vignes at Soissons (Figs. 9, 10), a relic of the French Revolution and one of



FIGURE 5.—THE WEST END, INTERIOR: SOISSONS.

the most beautiful though least known ruins in Europe, the same fact comes home even more strongly. Finally at Rheims (Fig. 11) the flying arches of the nave seen through the openings of the towers show the slightness of the relation between the whole composition of the façade and that of the nave, as at Soissons we saw the lack of structural relation. This whole matter of the façade however is also a question of exception to the principles of logic and revelation of structure, as well as of organic frame, and therefore will be considered further in those connections.



FIGURE 6.—THE GREAT BREACH AND BUTTRESS:
SOISSONS.

As regards the organic principle we must consider that perfectly as these façades express it within themselves, they now appear more clearly than ever as a frank departure from it in relation to the main body of the church.

And now we find ourselves asking the inevitable question, the crux of the whole matter. Was "*logic*" then,—the logic of the essential in construction,—the guide as well as the law by



FIGURE 7.—ABOVE THE VAULTING AFTER THE DESTRUCTION OF THE ROOF:
RHEIMS.

(*L'Art et les Artistes*, p. 50.)

which and under which these cathedrals were designed? Undoubtedly, we shall answer, their designs were penetrated to a very great extent by architectural reasoning, and especially so in the vaults and their ribs, for these are essentially an affair of construction. Possibly just because the problem was so difficult,



FIGURE 8.—THE TOWERS SEEN THROUGH THE DESTROYED NAVE: SOISSONS.
(Drawn in 1918 by the author.)

so rigid, it was here handled very simply. The absolute protection from a burning roof afforded by them to the rest of the structure, as proved at Rheims, the shape of the vaults, their small stones, their lightness, their level crowns, their conformation to the stilted wall ribs to concentrate their thrust, all seem to be based on an ideal of construction only. And yet we know

that in their most fundamental quality, that is their immense height, they were *not* controlled by logic, but by an ideal. This ideal desire for height, and always greater height, was the source of some of the greatest problems, in fact



FIGURE 9.—THE BACK OF THE TOWERS OF ST. JEAN DES VIGNES, BEFORE THE LAST BOMBARDMENT.

the cause of the whole system of exterior abutment with its risks and its costly construction.

But when we find in the statements of the theory that this architecture was primarily based upon the complex dialectic of the middle ages,¹ or that, to quote one of the latest histories,² "not an atom of the structure was irrelevant — nothing vital was left to whim or chance. The laws of beauty were subordinated to the laws of scientific life" — we feel the challenge of absolute logic. What then do we actu-

ally see? At Rheims we see a great wall rising to some distance above the extrados of the vaults and running all around the perimeter of the building (Fig. 7), and, above this again, a rich

¹ A. K. Porter, *Beyond Architecture*, pp. 37ff.

² Sturgis and Frothingham, III, p. 29.

and purely decorative parapet with pinnacles,¹ a very considerable effort on the part of the builders (Fig. 12); we see the construction for the light and purely decorative tower at the crossing which must have played an immense rôle in the general exterior effect of the original thirteenth century edifice. Again we see (Fig. 11) through the arches of the towers, more clearly than before, the vast difference between the size and shape of the body of the church and its façade. All these are, quite simply, not "dialectic," not "the laws of scientific life." Such sweeping extensions of the principle do not fit the cathedral at all. The truth is that the building is logical, but not exclusively so.

Now the designer who did these things was not governed entirely by logic, strict economy, and the like. Not at all. He departed from "logic" altogether at times and built into his cathedral parts which meant extra load on his slender piers and great expense, "purely unnecessary expense" as the current phrase has it. Being that sort of a man, he undoubtedly did other things in the building which were also as "unlogical" and decorative.

¹ Compare the very low parapet at Soissons (Fig. 3), which is all that necessity requires, as I have personally proved.



FIGURE 10.—ST. JEAN DES VIGNES: SOISSONS.

With this established one may perhaps obtain a light on some other hypotheses,—or problems. One of these is the suppression of the clerestory wall. Was it the fascination of the logical conclusion in finding the wall unnecessary that drove such a man to



FIGURE 11.—THE FAÇADE AFTER THE BOMBARDMENT: RHEIMS.

substitute a glass wall for a stone one, and this in spite of the fact that the glass must certainly have been more expensive as well as less permanent? For whatever the expense of the glass, nothing is simpler or cheaper in France today than plain ashlar, such as this wall would have been, and, judging from the mediaeval skill in masonry, it could hardly have been otherwise then. And if we are still in doubt, we may compare the amount of continuous wall which he built *above* his clerestory arches, quite contrary to

the structural requirements. Here also one may well doubt the part of logic and feel free to trust the lure in the beauty of the glass itself as the real motive for suppression of the wall.

Closely connected with the principle of logic is that of the *revelation of structure* for esthetic effect. Here again the ruins

generally illustrate the theory and confirm it in its broad application. In the vaulting, the manner in which the breakage has occurred, as well as its extent, does confirm strikingly the theory that the ribs carry the vault cells and are not only real functioning members, but are the most important part of the vault. The cases where the whole cell has fallen as far as the rib, are not only more numerous than those of the opposite kind, but the latter themselves usually show breaks following the rib's direction, although they may not come quite to it. In this, moreover, the facts seem to disprove Mr. Porter's view¹ that the function of the

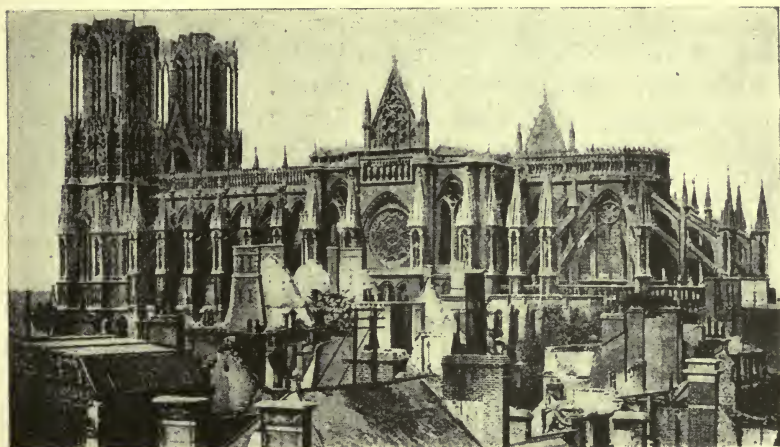


FIGURE 12.—THE CATHEDRAL FROM THE SOUTH AFTER THE DESTRUCTION OF THE ROOF: RHEIMS.

ribs in supporting the vault has been "grossly exaggerated," being primarily for support of the wooden centering, and Brutails' statement² that the rib was in theory for support but in fact for appearance.

In regard to this general principle, however, there seems to be some confusion of thought. In the case of the vaults and their ribs it is apparently a principle of convenience, to be made use of where there was an effect to be gained. It is a principle expressed in much other architecture, as in the dome of the Pantheon, the high undecorated architrave emphasized as the working member of the Greek entablature, and so on. Similarly the

¹ Porter, *Construction of Lombard and Gothic Vaults*, p. 16.

² Brutails, *op. cit.* p. 153.

Gothic builders emphasized their vault ribs. Indeed there is an almost inevitable quality in the way the beautiful Gothic effects are bound up with their necessities, as, for example, the unsurpassed perspectives of their interiors, due to the structural working out of their aisles, transepts, and ambulatories, which yet seem, and perhaps are, necessarily imposed by the ritual. In fact we may truly say that the chief sources of esthetic effect in the interior are indeed those of the revealed structure, with the one notable exception of the stained glass.

It sometimes happens that such a principle is transformed in the mind from a means to an end in itself. Then it becomes thought of as a *law* of style and universal in its application. This is what seems to have happened in regard to this principle of revelation of structure and to have given rise to the point of view found in the books. Now this in fact amounts to ascribing certain feelings and a mental point of view to the mediaeval builders, which makes such statements humanly interesting at once, and gives the history of Gothic a dramatic, even a moral character. But it is at least venturing into another field, and one may raise the question whether the attribution of such a point of view should not be confirmed by, if not based on, the evidence of documents as well of executed designs. Among the historians this seems to be lacking and even in the quotations of so thorough an author as Mr. Porter, who goes the most deeply into documents to explain the mediaeval point of view, nothing of this sort appears. For its confirmation therefore we are limited to the monuments themselves.

Now actually we find that some of the cases often considered as revealed structure are not the real structure. At Soissons the single shaft on the lower story of the nave piers does not really support the vaulting shafts and, in turn, the vaults above (Figs. 1f, 4d, 5). The objection to this as an accidental case would be met by the fact of the very slight connection between the shaft and the pier, shown in the break,—not enough for the shaft to add to the strength of the pier. It by no means follows that the shaft is not good design, only that it does not express the facts of this structure; it is in fact an eye-satisfying fiction, although perhaps, a proper one.

Again let us take the case of the flying arch and its buttress. If we carefully notice the point of abutment of the arch's upper tier at Soissons (Figs. 2f, 6e) in relation to the height of filling of

the vaults (Figs. 2c, e, 4, 5, 6b) we shall see that probably only the lower edge of the flying arch abuts the filled or solid portion of the vault; the upper edge appears to abut, if the term may be used, only the wall. At best this is hardly a sufficiently good connection to warrant the second tier of the buttress; we may at least question whether it, like the pier shaft, is not an expression of structure which does not correspond to the real fact.

In the second place, we find in our ruins some cases of structure which are not revealed. One of these might have been seen before, though it is now made more clear than by drawings,—the filling of the lower half of the vault conoid and the possible transference of the thrust from the ribs to this solid portion (Figs. 2b, 5, 6b).

The word possible is used advisedly, for from the appearance of the filling (Figs. 2c, 4a, 6d, 18) it appears of doubtful value for any such purpose, and more like a mere addition of weight. It seems from the illustrations as if it were the heavy walls of the upper part of the solid portion, self-supporting almost without the rib, that were its strength. Thus the

solid portion performs a quite different function from the rest of the vault, a function which is not revealed.¹ This is in one way a small point, but in another it is not, the design as executed contributing very largely to that impression of the vaults being supported entirely on the interior. For this the ribs and shafts also were in large part designed.

Another similar case is found at Rheims where one photograph² shows apparently cross-bracing walls above the vault, and these abutted by the upper tier of the flying arch. This



FIGURE 13.—SHELL HOLES IN VAULTS:
RHEIMS.

(*Mon. franç.* Pl. 4, 1.)

¹ The larger stones in the shell of this part hardly express such a difference.

² Kimball and Edgell, *History of Architecture*, p. 287, fig. 144.

interesting construction appears in only one of the Rheims photographs and apparently did not occur at Soissons. It seems to show that the upper tier of the flying arch did not perform the part that it appeared to perform but another, which was not revealed.

Again there are the diagonal ribs which in both nave (Figs. 1, 2, 6, 13) and aisle seem to limit the breakage, in other words to be the strongest ribs of the vault, or the limits of its structural divisions. And yet this is not revealed by a larger section of the diagonal

ribs; on the contrary it is the heavy and wide transverse rib which appears to express such a function.

Then there is the structure of the roof, so much in evidence in the illustrations of Soissons (Fig. 2). Shall we dismiss this as "not the true roof,"¹ not important enough in the whole design to demand any revelation of its structure or of its method of support? We know its weight was about two-thirds that of the vaults,² a load which the designers had certainly to reckon with. Also, it did have a decorative value as may



FIGURE 14.—THE APSE: RHEIMS.
(*Mon. franç.* Pl. 3, 1.)

clearly be seen by the comparison of Rheims before and after its destruction (Fig. 12). And it was an organic structure, with its trusses corresponding to vault ribs, a structure which one may suppose could have been expressed, if the builders had wished it, instead of leaving it the plain unified surface that they did.

Finally there is the façade itself. The discussion about the greater or less lack of its relation to, or revelation of, the main

¹ Moore, p. 170.

² In St. Ouen at Rouen the load of roof on each pier is 12,000 kg.; that of vault, 20,000 kg. Guadet, II, p. 344, fig. 1096.

body of the building is not new; our clearness of vision is, however, now greatly increased. At Rheims, the flying arch-buttresses of the nave seen through the openings of the towers show the slightness of the relation between the whole composition of the façade and that of the nave. In St. Jean des Vignes at Soissons, the nave of which was destroyed many years ago, the façade appears as a great and massive structure in itself (Figs. 9, 10). In fact so nearly is it a complete composition that one can hardly realize in looking at it from the rear that he is not seeing the front. Finally we study the same point in the cathedral of Soissons from a photograph taken before the final bombardment (Fig. 15) and from this sketch, taken after the Aisne drive of June, 1918 (Fig. 8). Here we are look-

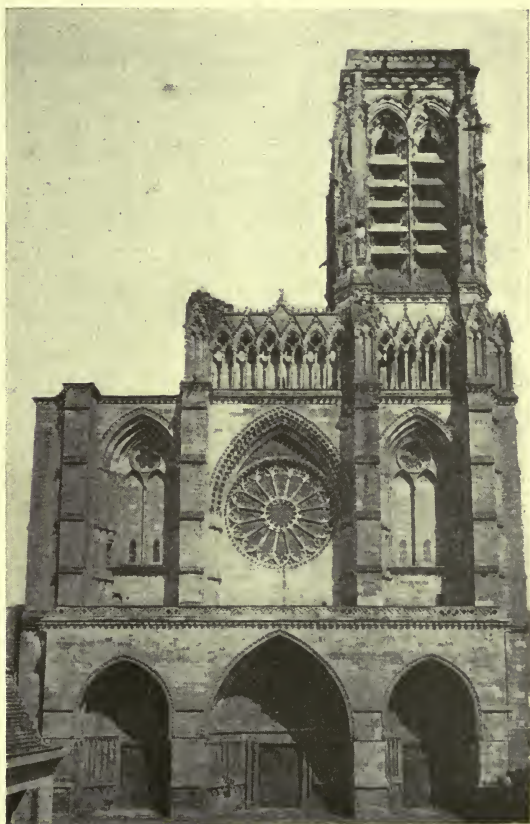


FIGURE 15.—THE FAÇADE BEFORE THE BOMBARDMENT: SOISSONS.

ing through the break in the nave toward the back of the façade mass and realize with astonishment that the comparatively small arch in the centre corresponds to the outline of the whole nave vault, the arches on either side being wholly outside the nave, on the back of the tower base. We then turn to the façade (Fig. 15) and see the expression, so simple and direct, of something which is not at all the building itself. Is it possible that to the

men who built these façades revelation of structure was a controlling principle in the sense that it has become for us, in our books? If we quote the charming design of Sainte-Nicaise,¹ now known only from drawings, as a truly developed Gothic façade, then these are not, nor are most of the others. Why force the principle into a law which leaves such façades as these to be its exceptions?

In all these cases, the builders must have been perfectly aware of what they were or were not revealing. The pier shaft, the upper tier of the flying arch, which they looked down upon and climbed over for months, if not years, during the construction, the different quality in the lower end of the vault, the cross walls under the roof, the more important diagonal ribs, the roof construction,—all of these they knew with an intimacy that no modern designer knows in his buildings. And by all of them the principle of all-pervading conscious revelation of structure is denied. Certainly it will be wiser in future to limit ourselves to a far simpler statement.

And now we come to the principle generally called the *balanced thrust*, sometimes considered the most fundamental one of the style.² Its simplest case, and the best understood, is that of adjacent arches, where the haunch of one shoulders the haunch of the next and so on down the nave. According to the theory, if one is removed the rest tend to fall, like a line of dominoes, and it is by thus balancing the thrusts of these haunches that they all stand. Now, if we look at the clerestory and nave arches of Soissons (Figs. 1, 2, 3, 5), we see a case in which the arches on either side of a breach stand perfectly well without their neighbors' counter-thrust, and this in spite of such terrific shocks to the whole frame of the structure, as could have caused these successive ravages.

The next case of adjacent thrusts balancing each other is supposed to be between the adjacent cells of the vaults or two adjacent diagonal ribs. Now as between the cells, this principle does not seem to be proved at all by the manner in which the cells remain (Figs. 1, 2c, 4c, 6d). It appears to be the ribs, especially the diagonal ones, which carry the vault cells and the thrust of the latter stops on them: In the cases of the diagonal

¹ Sturgis and Frothingham, III, p. 110.

² Sturgis and Frothingham, III, p. xxix.

ribs that are intact, the evidence seems to be conflicting. In Figures 2c and 6d only one diagonal vault rib remains, a contradiction of the theory; in 2b, 4a, and 6a there is the lower solid half of the vault conoid remaining, which may balance the adjacent rib, a confirmation of the theory. In the aisle vaults (Fig. 1aa) the diagonals of two vaults are both intact, but we have already reasoned that the counterbalancing diagonals that met on the missing pier probably went down from some cause other than the action of the thrust of one after the other was destroyed.

As to the main compartments of the nave vault, they do not balance each other, as may be seen by comparing some of the successive steps by which they fell (Figs. 2, 5, 8, also in table, No. 7). In searching for all the possibilities of the balanced thrust this case should be taken into account. It is sometimes stated, on the other hand, that these compartments were not intended to balance each other and that this was an advantage in construction, which now appears to be the true view.

But it is the case of the flying arch and the vaults, that is most cited as the outstanding example of this principle. Now in the sense that we have been using it, there is no balance of *active* thrust here worth mentioning. If the flying arch exerted much thrust against the vault, when the latter fell, the former would push the slender wall in. But we have here several cases where there has been no such effect on the wall at all (Figs. 2d, f, 6f). There was always equilibrium, of course, and the vault's thrust against the flying arch, but this latter is, in fact, little more than a strut or prop, that receives this thrust and transmits it to the large outer buttress. Transmission of thrusts rather than balance is what we find to be the truth of the case.

This may be seen more clearly by a drawing (Fig. 16)¹ in which the size and position of the buttress as ideally worked out by structural mathematics, are shown, together with an actual buttress of the church of St. Ouen at Rouen. Here the flying arch, as scientifically calculated, appears in its real character of a prop pure and simple. Of course, the lines of this ideal prop are not the only ones that will serve. The actual system is an artistic approximation, a roundabout but more pleasing method of performing the same function, just as the complicated broken curves of the great English timber roof trusses approximate

¹ After Guadet, fig. 1096. The temporary emergency supports built under fire at Rheims are reported to be of this form also.

the straight lines of certain truss forms, by virtue of which they perform their work.

At this point the question arises inevitably whether the Gothic designers knew what this mathematical form, this scientific

minimum, was. Undoubtedly¹ they did not know how to find it mathematically. Whether they knew that their usual form was as far removed from the bare necessity as it was, may be guessed from our inferences about their revelation of structure. If we believe, as it seems we may, that they were men who designed in general conformity to the actual structure, but enlarged freely upon this where it seemed inadequate, we may equally believe that they had learned in their earlier examples,² or in their workshops, approximately what the necessary lines of the flying arch were, but preferred to satisfy the conditions by freer, more architectural forms, such for instance, as those found at Soissons.

What then shall we say of the general principle? Simply, that in this case, it was really a transmission of the vault thrust to a buttress, placed at some distance,

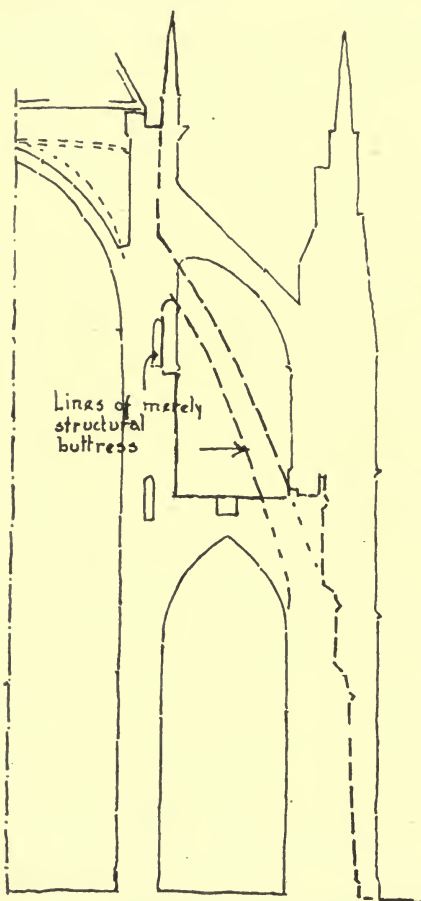


FIGURE 16.—SECTION THROUGH PIER,
ST. OUEN: ROUEN.
(After Gaudet, II, Fig. 1096)

while there was some balance of thrust of adjacent diagonal ribs on the pier.

¹ Gaudet, II, p. 331.

² For example, at Noyon, illustrated in Moore, fig. 74.

But at the same time, we should recognize this transmission of thrust as a really great innovation, as original as it was bold, and as successfully handled as it was characteristically Gothic. Instead of the "living forces" constantly at work throughout, "combating each other," we may better confine ourselves to the actual vaulting system and the transmitted thrust, as being really a new architecture; and we shall find in its skill, originality, and beauty sufficient cause for our admiration and study.

There remains one more general principle, the *lightness of construction* and its determining cause. Among the smaller ruins, there are several striking cases of the lightness of vault construction, the cells being mere shells of such thin stones that they have rattled down almost like tiles (Fig. 17). And at Soissons, the nave vaults are so light that some of them seem to have collapsed, ribs and all, from so slight an explosion that it did not destroy the roof at the same time. It may have been that a shell merely pierced the roof (Fig. 2m) and the vault or that one entered through a window (as at Fig. 2d) and shattered the delicate cells and ribs from below. If

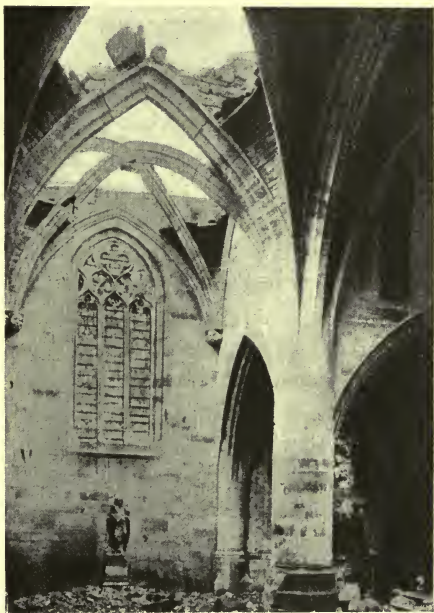


FIGURE 17.—THE CHURCH AT NETTANCOURT.
(*Mon. franç.* Pl. 13, 2.)

one asks whether the two vault-bays adjacent to the great breach did not follow its vault of themselves in obedience to the principle of balanced thrusts, we may refer to Figure 5, a photograph at an earlier date, and see this one bay gone and the others intact. At Soissons, the walls, also, are extremely thin (Figs. 1d, 3c, 6ef), especially the upper wall, which is only the thickness of one stone, and that merely thicker than the plate tracery by some slight reveal at the billet mould (Figs. 2f, 6e).

At Rheims (Fig. 13), on the other hand, the vaults are decidedly heavy and show no signs of collapsing. Evidently, the shells have torn only a definite hole in the splendidly built vault.¹ This same strength is seen in the great wall and parapet (Fig. 7). In fact, it is commonly said in France that the vaults of Rheims had the heaviest cross sections of any cathedral, that it was built like a fortress, and that it is due to this, that the vaults have not fallen altogether in the later bombardments. It might be added that it was due also to the devotion of the French soldiers, who climbed up and built the necessary supports of masonry under bombardment when the continual shelling of the crossing-vault threatened to succeed in wrecking the whole centre of the edifice.

What the underlying motive of the general lightness of Gothic construction was, may be disclosed to some extent by a comparison of Rheims with Soissons. The latter is in every respect a less costly, as it was a less important cathedral. A mere glance at the façade, at the pier capitals, at the roof parapets will illustrate this. Rheims was built to be the royal, the most splendid church of France, and the same lavishness shown in all these parts was carried into the construction. Conversely, the lightness of the construction of Soissons was clearly due to the same economy shown in the other portions.

This lightness of construction, however, is another matter from the lightness of effect, carried much further at Rheims, in its clustered nave piers, lighter flying buttresses, slender turrets on the façade. All this was, of course, not at all an economy and was done from a love of the effect itself, one of the most beautiful characteristics of Gothic.

Of the various outstanding problems in regard to the features of the cathedrals, most have been noticed already. Just what the controlling reason was for adopting the pointed arch in preference to the round, and whether this query, seemingly so purely archaeological, may be elucidated by the ruins, remains to be discussed. We have, indeed, seen that the diagonal ribs generally stand while the others fall (Table, No. 3). Now, these diagonals in the aisle are round arched (Fig. 1a), and in the nave nearly

¹ Of the later destruction, we have unfortunately no illustrations. No post cards of the interior were published as late as May, 1919, and it was forbidden to enter when I was there in October, 1918, on account of falling stones.

so (Fig. 5), to while all the other ribs are pointed (Figs. 4, 5). Apparently then, as far as construction went, the advantages were with the round arch, and the pointed was adopted for other reasons, such as reducing the thrust and the possibility of coördinating the arches and vaults, or beauty of form, or both. But the evidence of the ruins is by no means final in determining which was the stronger form of arch. It should be considered rather as one of a series of facts which further knowledge of the construction and of its history may some day establish.

One of the other interesting developments in the style is the change of the pinnacle on the buttress from a purely useful to an almost purely decorative purpose. In the chevet of Rheims (Fig. 14) there are two of the lofty pinnacle canopies destroyed and a third which lacks one of its columnar supports. All this has happened without much surrounding damage except to a light parapet, thus giving evidence of the real lightness of these constructions in spite of their solid appearance. Although this is hardly proof, for one could hardly expect the loss of even so high a pinnacle to cause the collapse of its buttress, yet it is a strong indication that this feature as early as the date of Rheims was known to be unessential to stability, and was actually, as it was in appearance, a decorative feature.

One more observation, and that of a general character, remains to be made. Among our first impressions, after studying the later illustrations of Soissons (Fig. 2), was the importance of the structure that remained when the vault had fallen. This came as a distinct surprise in view of the lengthy studies of the vaulting and its supports with which our works on Gothic are filled. One rather expected to find that the exterior wall which enclosed the vault-conoid was but an incident of the latter and would fall with it, that the church consisted of nothing but vaults, piers, and buttresses, and the enclosing "walls of stained glass." But here the observer counts the vaults of four out of the seven nave bays gone—two of them literally sloughed away—and yet the greater part of the structure is still erect. He sees the walls standing with all the composition of the nave complete, except for the timber roof instead of the vaults (Fig. 18), and he remembers with dismay the abhorred fallacies of Fergusson¹ about the "deceptive stone ceilings." He realizes, too, that this was the way the building looked in the middle ages during the

¹Fergusson, *History of Architecture*, I, p. 321.

long years when it was under construction, though more or less used for worship, until the final stage, when the vault was built in,—under the protection of the roof. He recalls moreover that to the mediaeval designer of the building that roof and those walls, the weight of the triforium, the aisle roof and its supports, the wind-bracing, and the disposal of floods of water and snow, all were a part of his problem,—and that he solved them all without, or in spite of, his vaults. And so he comes away at the last with a new sense of the building as a whole, con-



FIGURE 18.—INTERIOR OF THE ROOF: SOISSONS.

ditioned it is true in its fundamentals by the vault, but a great construction and a great design in and of itself.

In closing this survey of these two great examples of the theory of Gothic, what summary can we make? In the first place we see that the theory is truest, as it is most generally agreed upon, in its insistence on the organization of the structure, and that this is indeed wonderfully shown in the way it acted under the stress of bombardment.

In the next place, while the ruins reveal that the vaulting follows closely the necessities of construction, they reveal other

portions and other relations of parts which are contrary to them. These cases are not indeed the most important, but they are sufficient to refute the theory that constructional requirements carried to their logical conclusion can alone account for these designs. They are due to esthetic reasons almost entirely, and they indicate the probable importance of those reasons throughout.

The principle of balanced thrusts is far less true, and it should apparently have a minor place. It seems clearly at variance with the facts in its principal example of the flying arch and it seems to apply only to certain of the vault ribs.

The apparent revelation of structure seems to be over emphasized, to judge from these ruins, especially in certain cases such as the pier shafts, flying arch, and some features of the vault, often quoted as proving it. It should be considered, as I believe it must have been by the mediaeval builders themselves, as an architectural resource rather than a principle; to be freely enlarged upon, compromised, or denied, when the esthetic effect of the whole seemed to require it.

The lightness of the construction is strikingly confirmed, but it appears rather as a matter of necessity in the actual construction, and a matter of architectural design in the exposed portions.

In all that has been said so far, we have limited ourselves to the theory; when we have found the facts at variance with it we have emphasized not what the architecture *was*, but what it was *not*. Thus we seem to have stripped it of one quality after another. We have apparently been destructive, seizing upon its terrible misfortunes to prove it somehow wrong.

Let us now turn the page. What seems destructive is in reality freeing these beautiful creations from the too rigid shackles of classification devised by scientifically-minded men of letters. Sweeping assertions built upon the enthusiastic hypotheses of Viollet-le-Duc or on literary theories of architecture do only harm to an art such as this, and cause revulsion instead of devotion among its admirers. A looser, freer, truer theory is the only one that will fit such a history of the human spirit as is built into these cathedrals. If in so doing we are to deprive the historian of his "most satisfactory" chapter, where "all rests on undeniable mathematical and scientific premises,"¹ so much the worse for him. Of all great architecture, this is the most imaginative, the

¹ Sturgis and Frothingham, III, p. 9.

most founded on a purely ideal program. While developed with wonderful reasoning, that immaterial program,—namely religious sentiment, with its accompanying feeling for height and mystery,—is at the base of it all and is felt throughout.

In thus breaking sharply with certain points of the writers' theories, we are in no way taking a step backward, but rather looking toward the future. These ruins seem inevitably to suggest another statement of Gothic, not a part of this present paper, as it may come to be written with our changing point of view, a statement in which the ribs of the vaults, the shafts of the piers, the actual shape of the flying arches, the all-including openings, and finally the façade, will find their true explanation as parts of a purely architectural design, absorbing, yet dominating the requirements of prelate and mason alike.

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ADDITIONAL NOTE ON PP. 49-51

The following quotation from *Guides Illustrés Michelin des Champs de Bataille* (Paris, 1919), section on Soissons, p. 21, shows how the ruin at Soissons, discussed on pp. 49-51, was caused.

"At the beginning of February, 1915, a shell . . . struck the second column of the nave and cut into it at 4 m. above the ground. The portion above with the capital and the stone courses carrying the load of the vault ribs collapsed, dragging down in its fall a section of the triforium and back wall. This ruin was soon increased. At the end of March the vaults of the nave and aisle, formerly held by the broken column, no longer having their support, fell; the whole (section) of the triforium, the window, the exterior flying arch, the wood framing, and the roof of the nave bay crashed down also."

This, if correct,—and there is no reason why so circumstantial an account should not be believed,—although it overthrows my surmise as to how the break occurred (pp. 50 f.), confirms the general position of this paper, that there was less balance of thrusts and less revelation of structure than usually supposed.

THE CARMELITE MADONNA OF PIETRO LORENZETTI

THERE are two documents on record for the year 1329 which concern the Sienese painter, Pietro Lorenzetti. The first,¹ dated October 26, has to do with the granting, by the "Gran Consiglio de la Campana," of a petition offered by the prior and brothers of Sta. Maria del Carmine, through the good graces of the Novi. In this petition, the good brothers requested of the community of Siena financial aid in paying for "a certain honorable altarpiece, and a very beautiful one, in which the Virgin Mary and the most Blessed Confessor Nicholas, and the apostles and martyrs, confessors and virgins, have been painted most exquisitely and earnestly by master Pietro Lorenzetti of Siena, which altarpiece is said to have cost 150 gold florins." The Council granted them fifty pounds. The second document,² dated December 29, records the payment of the fifty pounds promised the monastery on October 24.

This altarpiece, though one of the grandest executed by Pietro Lorenzetti, has been considered by critics on Sienese painting as lost; as the only record on hand is the statement made by Milanesi³ that it was sold into England in 1818. But this reference must have applied to the side pieces only and possibly to panels of the predella. Two of the predella fragments, one representing an angel appearing in a vision to a dreaming monk, the other depicting the granting of the charter to the Carmelites, are now in the Academy at Siena.⁴

The Madonna of this altarpiece, though considered as lost, has never left Italy and has been hanging in the Academy at Siena ever since its removal from the church of Sant' Ansano outside the Pispini Gate at Siena. The panel,⁵ in its present

¹ Milanesi: *Doc. Sen.* 1, 194.

² *Id. ibid.*

³ *Id. ibid.*

⁴ Nos. 83, 84.

⁵ No. 39.



FIGURE 1.—THE CARMELITE MADONNA OF PIETRO LORENZETTI: SIENA.

condition (Fig. 1), shows the Madonna and Child enthroned in the centre, with Saint Nicholas on the left and Saint Anthony the Abbot, with his staff and pig, on the right. There are four angels standing behind the Madonna's throne; the two central ones hold lilies. On the edge of the throne at the Madonna's feet runs the following inscription: "PETRUS LAURETI DE SENIS ME PINSIT A. D. MCCCXXVIII."

The evidence, besides the date 1329, that this is the Carmelite Madonna, rests on the following facts: On the lower right-hand corner of the Virgin's throne we read the inscription: "ELYAS PHA," in other words "Elijah the prophet." This inscription was originally used for the figure now called St. Anthony, just as on the left-hand corner we have the inscription, "S. NICHOLAUS," for the figure of the saint above it, who has been lucky enough to retain his identity. But what is the significance of Elijah in this picture? Why was he put in this altarpiece? He is surely an unusual apparition in Italian art.

Elijah was the patriarch saint and the supposed founder of the Carmelite order.¹ But there has been much controversy about this in the church. The legend runs that the early Carmelites built a monastery near the fountain of Helias (Elijah), and also an oratory to the Virgin, thence called "Our Lady of Mount Carmel." Elijah was, therefore, the saint of greatest importance to the Carmelites, with the exception of the Virgin. His presence would be practically imperative in any Carmelite altarpiece, and similarly he must be associated with that order when found in such a conspicuous position as in this altarpiece. He is also found in other Carmelite altarpieces, as for example in the altarpiece by Giovanni d'Asciano in the oratory of San Niccolo near the Carmine at Florence.² Elijah's relation to the Virgin is emphasized in Pietro's altarpiece by the gesture of the Christ Child towards him.

Originally, then, this Madonna was painted for a Carmelite monastery. The date is that of Pietro's commission to do an altarpiece for the Sienese Carmelites in 1329. Beyond doubt the so-called Ansano Madonna is in reality the lost Carmelite Madonna. Later, when the picture for some reason or other changed hands and the Madonna was separated from the remainder of the altarpiece, the Elijah was made over into a S. Anthony with staff, pig, and bell to suit the church or donor into whose hands it had fallen. I need hardly add that the document calls for a S. Nicholas in the picture, who is duly identified by the inscription on the panel. Finally, in the costumes of the figures, and especially in the light mantle of the Virgin over the dark tunic we have the colors of the Carmelites. The predella below,

¹ Moroni: *Dizionario di Erudizione Stor.-Eccl.* X, 44 ff, 52 ff.

² Note also that S. Nicholas is a favorite saint of the Carmelites.

though entirely repainted, might, if cleaned, yield other interesting connections.

Since this altarpiece contained, according to the document, "apostles, martyrs, confessors, and virgins," which must have been in the side panels, it was presumably an elaborate Majesty similiar to Ambrogio Lorenzetti's at Massa. This would then explain the dignified and hieratic position of the Virgin. And since Milanesi must have had some evidence for asserting that the Carmine altarpiece was sold into England, the sides may actually have gone there.

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GENERAL MEETING OF THE ARCHAEOLOGICAL INSTITUTE OF AMERICA

DECEMBER 29-31, 1919

THE Archaeological Institute of America held its twenty-first meeting for the reading and discussion of papers at the University of Pittsburgh December 29, 30, and 31, 1919, in conjunction with the American Philological Association. Three sessions for the reading of papers were held and there were three joint sessions with the American Philological Association. The abstracts of the papers which follow were furnished by the authors.

MONDAY, DECEMBER 29. 2.30 P.M.

1. Miss Helen H. Tanzer, of Hunter College, *The Roman Marriage Custom as Described in Lucan*. (Read by Professor G. M. Whicher.)

In the account which Lucan gives (*Pharsalia*, II, 352-371) of the remarriage of Marcia to Cato the Younger after the death of Hortensius, the orator, to whom he had ceded her, we have an almost photographic description of the confarreate marriage ceremony. The poet represents Marcia as begging Cato to allow her to return to him if only that "*liceat tumulo scripsisse: 'Catonis Marcia'*." Cato agreed, and though the time was not appropriate and the war required his attention, the marriage took place but with only the most necessary portions of the ceremony, the rest omitted by force of circumstances. It is here that Lucan has done us a service, for he mentions both what was done and what was left undone, thus furnishing material for commentators and archaeologists. "No festive garlands or wreaths hung from the doorway, no white fillets bound the door posts, the usual torches were not there, nor the high couch with its ivory steps and gold embroidered hangings; no matron with high-crowned headdress lifted her lest her feet touch the threshold. No flame colored veil lightly hid the bride's timid blushes nor covered her downcast countenance; no jewelled girdle held down her flowing robes, no collar gracefully encircled her neck, no tunic covered her arms. The usual witty sallies were not uttered nor the Sabine jests. There were no relatives or friends assembled, they were united in silence, satisfied with Brutus alone as witness and assistant."

There followed parallel passages from other Latin writers cited by way of illustration, and comments from commentators by way of explanation.

2. Miss Cornelia G. Harcum, of Rockford College, *Roman Cooking Utensils in the Royal Ontario Museum.*

This paper had as its main interest the collection of Roman cooking utensils in the Walter Massy Collection in the Royal Ontario Museum, most of which were found in Egypt. A comparison was made of ancient with modern cooking utensils. The materials, mode and place of manufacture, decoration, and details of workmanship of these utensils were discussed. The most interesting set in the Royal Ontario Museum is a very complete kitchen equipment which was discovered in what appeared to be the remains of a burned house near Thebes. It contains twenty-seven pieces of bronze in excellent preservation. The date of these utensils is probably about the first or second century. Of special interest also is a series of iron frying-pans with folding handles which were found in Egypt and belong to the late Roman period. The pans are hammered and the workmanship is exceedingly good. As they were discovered with other military remains the logical conclusion is that they formed a part of the soldiers' equipment and that the folding handles which are rather rare were designed to make the kits more compact. A bronze ladle, in this collection, with an extension handle shows a decided variation from the usual form. Illustrations were shown of a great variety of cooking utensils from the common *olla* or porridge pot to the *harpago* which was used for taking meat from a kettle.

3. Professor David M. Robinson, of Johns Hopkins University, *A Roman Terracotta Savings-Bank at the Johns Hopkins University.*

Children's savings-banks or money boxes are mentioned nowhere in Greek or Latin literature. If they were, they probably would be called *thesauri* or *loculi*. We know them from archaeology, and nearly fifty are now listed. They have been well discussed by Graeven, 'Die thönerne Sparbüchse' (*Jb. Arch. I. XVI*, pp. 160-189). In addition to the one late Greek example from Priene mentioned by Graeven is another in the Athens Museum (No. 5264), but all the other specimens are Roman and have been found in the western half of the Roman world—in Italy, France, Germany, England, and the Netherlands. There are four main types, that in the form of a small chest, that in the form of a vase (cf. Plautus, *Aulularia* and Horace, *Sat. II*, 6, 10), that with a flat circular form, resembling somewhat the body of a Roman lamp, with a design similarly placed in a medallion on top, and that in the shape of a bee-hive. Of the chest type, there is one unpublished example in the Stoddard Collection at Yale University. Of the third class, there is an example at Columbia University with Hermes standing inside a shrine with two columns. Another was seen in 1908 in the Arndt Collection in the Glyptothek at Munich by the writer who knows eight of this type. Of the bee-hive or last type, there are several specimens. One which was in the Castellani Collection, and had disappeared, is at Columbia University. It represents Hermes, *lucrorum potens et conservator*, standing on a base within a shrine with four columns, the caduceus in his left hand and pouch in his right, and a cock beneath his right hand, and has a slit above for putting in the coins. Another specimen in America of the

early second century A.D. is at the Johns Hopkins University and is probably that sold at auction with the Saulini Collection in 1899. It represents a draped Hermes standing on a base within a shrine with two columns, caduceus in right, and pouch in left hand, and has the slit above the shrine. On the back is an inscription which should be read *Bas. Augu. (Bassieni Augurini)*. The Saulini catalogue reads *Las. Augu.* and Graeven (*Jb. Arch. I. XVI, p. 181*) wrongly suggests *Pas. Augu.*, though Passienus is another form of Bassienus. (cf. Schulze, *Zur Geschichte Lateinischer Eigennamen*, pp. 213 ff.). A specimen from the Esquiline in Rome is probably from the same mould. In Munich in the Antiquarium is another unpublished example of the bee-hive type. Slides were shown of many examples of all types; and their purpose and relation to the lamp-industry and the significance of the scenes on them were discussed.

The origin of the bee-hive type was especially considered, and Miss Harrison's suggestions were discussed (cf. *Themis* pp. 396 f; *Essays and Studies presented to William Ridgeway*, 1913, pp. 136 ff.). There is a resemblance in shape to Mycenaean bee-hive tombs, to the primitive underground dwelling, and its counterpart above ground at Orchomenus, a type which has survived to the present day in Kurdistan, in Switzerland, in Italy, and even in America as well as in Greece. These bee-hive tombs were called even in the days of Pausanias *thesauri*. Sophocles in the *Ichneutae* calls Cyllene's cave-dwelling where the wonder-child Hermes is kept, a *thesaurus*. So also the omphalos as a tumulus or tomb had the shape of a *thesaurus* and when Varro in *De Lingua Latina*, VII, 17, compares the omphalos at Delphi to a *thesaurus* he may be thinking of one of these bee-hive banks and not of a bee-hive tomb, a type which hardly survived underground till Roman times except possibly in the Tullianum and the Mundus.

4. Dr. Stephen B. Luce, of the University Museum, Philadelphia, *Etruscan Antefixes from Cervetri and Corneto in the University Museum, Philadelphia*.

This paper will be published in full in a later number of the JOURNAL.

5. Dr. Leicester B. Holland, of Philadelphia, *Primitive Aegean Roofs*.

This paper will be published in full in a later number of the JOURNAL.

6. Miss Marion E. Blake, of Cornell University, *A Suggestion to Teachers of Epigraphy*.

The speaker pointed out some of the difficulties in teaching epigraphy. Photographs of the stones or of squeezes are unsatisfactory, and squeezes themselves are too fragile for regular class-room use. Photographs of the reverse of the squeeze are clear, but confusing to the student because the letters are reversed. The device of photographing the back of the squeeze on the back of a film and then printing by direct contact will reverse the print and make the

inscription read correctly. Lantern-slides could be prepared or prints put into the hands of the students, or even a text-book of half tones compiled for the class-room. Slides were shown demonstrating the advantages of the method advocated.

7. Mr. E. T. Dewald, of Princeton University, *A Lost Painting by Pietro Lorenzetti*. (Read by Professor G. W. Elderkin.)

This paper is published in full in the present number of the JOURNAL, pp. 73-76.

TUESDAY, DECEMBER 30. 9.30 A.M.

1. Professor Howard Crosby Butler, of Princeton University, *Report of the Committee on the Protection of Historic Monuments in the Near East*. (Read by Professor G. M. Whicher.)

No abstract of this paper was received.

2. Professor William N. Bates, of the University of Pennsylvania, *Recent Theories on the Origin of the Alphabet*.

After referring to the theories of De Rougé, Deecke, Peiser, Hommel, Delitsch, Zimmer, Grimme, von Luschan, and Hogarth the writer discussed the so-called Sinai script and the theory of A. H. Gardiner; the potsherd writing of Egypt, and the theory developed by Flinders Petrie in various papers; and the pictographic and linear script of Crete, and Sir Arthur Evans's theory. The relation of Minoan script to the characters of the Cypriote syllabary was touched upon, and incidentally the theories of Naville, Schneider, Lidzbarski, Sundwall, and Pretorius were briefly considered. Other theories such as those of Breasted, Pilcher, Stucken, and Bauer were also explained. Much progress has been made during the last twenty years towards solving this old problem, and two points may be regarded as established as a result of recent researches. 1. No theory of the origin of the alphabet can now be considered seriously unless it can show actual forms and explain their development; the time has gone by for mere speculation. 2. We can now say with considerable confidence that the Greek alphabet was not derived from the Phoenician, though it may well have been influenced by it. A definite solution of the problem of the source of the alphabet is by no means impossible, and, in fact, does not appear to be far off.

3. Professor R. A. MacLean, of McGill University, *Some Ancient Sites in Mesopotamia*.

This paper deals with some ancient and modern sites in Mesopotamia along the Tigris and the Euphrates,—sites which I became more or less familiar with during a residence, or perhaps I should say a mere existence, of two and a half years in that country during the war. On the Euphrates Anah and Hit are both of ancient origin. Anah interests us for the opposition which its fortress

gave to Julian, while Hit, or Is of Herodotus, is famous for its production of bitumen. Hit is probably the Charmande of Xenophon.

The country between the Tigris and the Euphrates in the vicinity of Bagdad is of interest chiefly for its connection with Xenophon and the route of the Ten Thousand. It is difficult to place with any degree of accuracy the sites of the Median Wall, the four canals, and the cities of Sittace and Ops, as there are few existing remains. The key to the whole situation lies, I think, in the location of Ops. Following Ross, Miss Bell, and others who have made investigations concerning this and other places in Mesopotamia, I have concluded that Ops was a little north of the junction of the river Adhaim with the Tigris. In that case the Adhaim would correspond to the river Physcus mentioned by Xenophon.

The other sites mentioned along the Tigris are more easily determined. There are, it is true, no traces of Seleucia, but its site is known from its relation to Ctesiphon which is marked to-day by the huge fragment of an arch. Further up the Tigris, the Larissa of Xenophon is the ancient Nimroud, while Mespila, or the modern Mosul, is on the site of the ancient Nineveh.

4. Professor Edgar L. Hewett, of San Diego, California, *America in the Evolution of Human Society*.

No abstract of this paper was received.

5. Mr. Albert M. Friend, Jr., of Princeton University, *Manuscripts, Ivories, and Goldwork in the Abbey of St. Denis under the Patronage of Charles IV*. (Read by Professor G. W. Elderkin.)

The paper reconstitutes the school of illumination, ivory carving, and goldsmiths' work active in the Abbey of Saint-Denis near Paris under the patronage of Charles the Bald (840-877). The manuscripts have already been grouped, but under the assumption that they were illuminated in the Abbey of Corbie near Amiens, an assumption poorly supported by the provenance of one uncharacteristic example. On the other hand the eclectic character of the illumination shows that all the manuscripts must have been done at some centre where there was a library containing examples of each of the earlier Carolingian schools, and also, in view of unmistakable classic and Byzantine influences on the school, some manuscripts of Eastern and Italian provenance. Such a collection is to be found in the library of Charles the Bald, which must have been deposited either at the royal residence at Compiègne, or in the Abbey of Saint-Denis, of which Charles was secular abbot, and where he spent a large portion of his time when not travelling. We know that his collection contained specimens of the school of Tours and of the Franco-Saxon school; there is also good reason to suppose that it contained the masterpiece of the Ada-group—the Soissons Gospels—and the Utrecht Psalter which represents the style of Rheims.

The school produced, besides the "Corbie" manuscripts, a group of ivory-carvings already isolated by Goldschmidt as the "Liuthard-group," to which may be added two ivories in the Morgan collection in the Metropolitan Museum, representing respectively Christ enthroned with Peter and Paul, and the Virgin enthroned and adored by angels (*A.J.A.* XXIII, 1919, pp. 394 ff.),

wherein the lyric pen-style of the school is considerably toned down by adherence to some Eastern model which the sculptor had before him. Two more may also be added to Goldschmidt's group: the book-cover of the Missal of Saint-Denis (Bibl. Nat. lat. 9436), and a plaque in the South Kensington Museum.

The gold-work of the school has never been assembled, but it may be identified in four pieces: the front cover of the Ashburnham Gospels in the Morgan collection; the ciborium, or field-altar, of Arnulf, emperor of Germany, 887-899, the front cover of the Codex Aureus of St. Emmeran in Munich, and the antependium of the high altar of the Abbey of Saint-Denis itself. Two of these pieces are traceable to the Abbey, viz., the antependium and the cover of the Gospels of the St. Emmeran Codex, a manuscript belonging to the group and made for Charles the Bald. This and the fact, attested by a writer of the ninth century, that the abbey possessed at that time a famous school of goldsmiths, makes probable the attribution of the four pieces of gold-work mentioned, as well as the manuscripts and ivories discussed above which are closely allied to the gold-work in style, to the Abbey of Saint-Denis.

This attribution is confirmed by two peculiarities of iconography which connect the school definitely with the abbey. The first is the appearance in these works of a profusion of angels, reflecting the influence of the Celestial Hierarchy of the Pseudo-Dionysius the Areopagite, identified at the period with Saint-Denis of France. This manuscript was translated at the order of Charles the Bald by John Scotus Erigena from the Greek manuscript sent to Louis le Debonnaire by the Byzantine emperor Michael in 824, and deposited in Saint-Denis. Echoes of the same work occur in poems of Scotus, and appear also in the works of the school in the multiplication of angels, with occasional indication of the different orders into which the Pseudo-Dionysius divided them.

The letters of Dionysius the Areopagite, translated at the same time by Scotus, contain a description of the eclipse at the time of the Crucifixion, by the vision of which the Areopagite was converted. According to this description the moon advanced until it covered the sun and then returned whence it came. This explains why in the Crucifixions of the school the moon is persistently facing right, out of the composition, as if returning on her course. The detail undoubtedly reflects the interest in the incident on the part of the monks of Saint-Denis who confused the Areopagite with their patron saint, and its appearance on the works of the group,—miniatures, ivories, and gold-work,—serves to confirm the location of the atelier which produced the manuscripts of Janitschek's "Corbie" school, the ivories of Goldschmidt's "Liuthard" group, and the four pieces of gold-work cited, in the royal Abbey of Saint-Denis, where the school must have flourished in the last half of the ninth century under the patronage of Charles the Bald.

TUESDAY, DECEMBER 30. 8 P.M.

Joint Session with the American Philological Association. Subject: Archaeology and Classical Philology.

1. Professor Harold N. Fowler, of Western Reserve University, Greece.

2. Professor Morris Jastrow, of the University of Pennsylvania, *Mesopotamia*.

3. Professor Gordon J. Laing, of the University of Chicago, *Italy*.

WEDNESDAY, DECEMBER 31. 9.30 A.M.

1. Mr. W. B. Dinsmoor, of the American School of Classical Studies at Athens, *The Monument of Agrippa at Athens*.

The pedestal of Agrippa, usually dated 27-12 B.C. on account of the inscription on the west front, has sometimes been attributed to earlier periods on insufficient evidence (orientation, relation to Propylaea, etc.). There is, however, valid evidence for an earlier dating. The inscription, as Fauvel pointed out in manuscript notes, is cut on a surface roughened by the erasure of an earlier inscription, in five lines but with much larger letters, of which a few traces are preserved. Then the plinth of the quadriga has hoof cuttings for two successive groups of horses, one apparently earlier than Agrippa. Finally, the architectural forms and construction of the pedestal are those of Pergamene, not Roman, work. The true date may, therefore, be 178 B.C., when Eumenes II and his brother Attalus seem to have won Panathenaic chariot victories. We may assume that on this same pedestal was set up Marcus Antonius as the New Dionysus, probably in 38 B.C. when he was victor in the Antonian Panathenaea; Cleopatra as Isis would seem to have been set up beside him in 32 B.C. For in 31 B.C., on the eve of the battle of Actium, statues of Antonius and Cleopatra, which replaced colossi of Eumenes and Attalus, were hurled down by a hurricane (Plutarch and Dio Cassius. By confusion with the groups dedicated by Attalus I, this story was sometimes localized above the theatre, and it was said that a Dionysus of the Gigantomachy was hurled down; but probably in these earlier Attalid groups, as in the Niobid group, no victors were represented). Agrippa, arriving in Athens shortly afterward, found the pedestal empty, and his statue was erected in the place of his defeated opponent.

2. Dr. T. Leslie Shear, of Columbia University, *The Lion Group at Sardis*.

This paper will be published in full later.

3. Professor G. W. Elderkin, of Princeton University, *A Re-examination of Archaic Laconian Grave Stelae*.

This paper will be published in full later.

4. Professor George H. Chase, of Harvard University, *Two Vases from Sardis*. (Read by Dr. James M. Paton.)

This paper will be published in full in a later number of the JOURNAL.

5. Miss G. M. A. Richter, of the Metropolitan Museum of New York, *The Subject of the Ludovisi and Boston Reliefs*. (Read by Dr. James M. Paton.)

This paper endeavored to show that the widely adopted interpretation of the Boston relief as the settlement of the dispute between Aphrodite and Persephone for Adonis rests on insufficient evidence and presents many difficulties. A new interpretation was advanced, based on the supposition that the Boston and Ludovisi reliefs are pendants or parts of one monument.

6. Mr. Carl W. Blegen, of the American School of Classical Studies at Athens, *The So-called Temple of Hera at Tiryns*.

7. Mr. Carl W. Blegen, of the American School of Classical Studies at Athens, *Ephyrean Ware*.

These two papers will appear in the account of the excavations at Korakou, Corinth, shortly to be published.

ARCHAEOLOGICAL NEWS¹

NOTES ON RECENT EXCAVATIONS AND DISCOVERIES; OTHER NEWS

WILLIAM N. BATES, *Editor*

220, St. Mark's Square, Philadelphia, Pa.

GENERAL AND MISCELLANEOUS

BULGARIA.—Recent Discoveries.—In *Arch. Anz.* 1915, cols. 218-235 (13 figs.) B. FILOW gives a summary of recent archaeological finds in Bulgaria. In a neolithic settlement on the hill Kajadermen, near Shumen, similar in character to that on the hill Denef, near Salmanovo, there were found a large clay model of a rectangular house with pitch-roof and round openings for windows and doors, and a vessel in the form of a four-footed animal with wide-open mouth. On the floor of one house the hearth and a hand mill with movable stones for grinding were found. Several early Christian churches have been excavated and they show some peculiarities of plan, such as a "horseshoe" apse, that are found in churches of Asia Minor. On the side of the Red Church near Perushtitza there are two churches, one above the other. Among the single finds there may be mentioned: votive reliefs to Hera and the Thracian Horseman on which the latter is called ἄγριος; about a dozen pieces of Roman jewelry, necklaces, armlets, etc. of gold and semi-precious stones, found in a child's coffin, some of which are very fine work and certainly imported; a marble relief of a Roman doorway with arched opening between pillars which support an architrave and pediment; parts of a bronze tripod with figures of Silenus and busts of Dionysus; a bronze statuette of Venus, 19 in. high, nude, drying her hair, excellent work, from Ratiariae; a curious Roman gravestone with tripod and heraldic dolphins in relief and a huge pine cone on top; two terracotta facing-tiles with Medusa heads and anthemions, from a large building of the fifth century B.C.; about 200 gold coins of Justin and Justinian; silver coins of Alexander the Great, Philip III, and Antiochus I, and Roman

¹ The departments of Archaeological News and Discussions and of Bibliography of Archaeological Books are conducted by Professor BATES, Editor-in-charge, assisted by Professor C. N. BROWN, Miss MARY H. BUCKINGHAM, Dr. T. A. BUENGER, Professor SIDNEY N. DEANE, Professor HAROLD N. FOWLER, Professor HAROLD R. HASTINGS, Professor ELMER T. MERRILL, Professor LEWIS B. PATON, Professor A. S. PEASE, Professor S. B. PLATNER, Professor JOHN C. ROLFE, Dr. JOHN SHAPLEY, Professor ARTHUR L. WHEELER and the Editors, especially Professor MARQUAND.

No attempt is made to include in this number of the JOURNAL material published after December 31, 1919, but the publication of summaries of articles in foreign periodicals not received during the war is begun.

For an explanation of the abbreviations, see pp. 118-119.

denarii of the first and second centuries. A tentative reading of the recently discovered Thracian inscription makes the dedicator one of the Tilataei, Τιλатаῖοι, of Thucydides.

ELAEUS.—Excavation of the Necropolis.—During the Gallipoli campaign of 1915 French entrenching operations opened a necropolis on the hill at Eski-hissarlik near the mouth of the Dardanelles. Systematic exploration, often under fire, was carried on from July 8 to September 30. The results are set forth in detail in *B. C. H.* XXXIX, 1915, pp. 135-240 (12 pls.; 10 figs.) by J. CHAMONARD, E. DHORME, and F. COURBY, while a brief account of a later campaign from October 7 to December 12 is given by Lieutenant J. LEUNE. Extracts from two letters by Dr. LEUTHREAU are appended. The necropolis must have belonged to the Athenian colony, Elaeus, the site of which is thus fixed at the point chosen by Choiseul-Gouffier. The burials were generally in stone sarcophagi; less often in large pithoi. Both sarcophagi and pithoi were completely covered by earth. If stelae were erected, they have disappeared. The necropolis was in use at the end of the sixth and during the fifth century. Some of the tombs were reused in the third or second century. In the first campaign 38 sarcophagi and 18 pithoi were uncovered. A complete inventory of the contents is given. There is also a brief list of the contents of nine pithoi found in the second campaign. The objects buried were chiefly small vases of clay and glass, terracotta statuettes, ornaments, some lamps, and a few tools. The earlier vases were Attic, the later from Asia Minor.

MACEDONIA AND THRACE.—Inscriptions.—In *B. C. H.* XXXVII, 1913, pp. 84-154 (17 figs.) C. AVEZOU and C. PICARD publish fifty-two inscriptions collected in Macedonia and Thrace in 1911-1912. The first group (34) was then in the museum established by the Turks in the school Sultanieh in Salonica. It includes a very fragmentary letter of M. Aurelius and L. Verus dated in 165 A.D., an edict of an imperial magistrate, dedications, and sepulchral inscriptions, many of the latter accompanied by reliefs. Two stones bear the Thracian horseman, and three the symbolic raised hands. One inscription seems to refer to a Mithraic cult, and another to the cult of oriental deities, among whom is Hermanubis, whose name appears here for the first time in an inscription. The other inscriptions are from Abdera (10), including a stele with four decrees of the second century B.C.,—one of proxeny and three in honor of Romans,—Maronea (6), and Trajanopolis ad Hebrum (3). *Ibid.* p. 447, the authors add notes to their article. *Ibid.* XXXVIII, 1914, pp. 63-70, M. HOLLEAUX comments on two of the decrees in honor of Romans from Abdera, and suggests modifications in the restorations of the editors.

NECROLOGY.—A List of Deaths.—In *R. Arch.* IX, 1919, p. 397, X. records the death of a number of German archaeologists in addition to those (Conze, Helbig, etc.) already mentioned since 1914. They are H. Lattierman (August 6, 1914); H. Kohl (September 24, 1914); S. Sudhaus (November 22, 1914); K. Hadaczek (December 19, 1914); C. Klügmann (January 18, 1915); R. Wünsch (May 17, 1915); G. Loeschke (November 26, 1915); F. Hauser (February 20, 1917); Botho Graef (April 9, 1917); G. Körte (August 17, 1917); Hermann Winnefeld (April 30, 1918); and the following, the dates of whose death are not given: E. Borrmann, D. Fimmen, K. Körber, M. Meurer, F. Ohlenschläger, M. Ohnefalsch-Richter, H. von Rohden, A. Schöne, P. Weizsäcker, A. Mahler, G. Pollak, S. Wide (Sweden). The names of the following

orientalists and biblical scholars are added: R. B. Brünnow (United States), F. Fita (Spain), Eb. Nestle, R. Gregory, H. von Soden (Germany).

Clarence Bicknell.—Born near London in 1842, Clarence Bicknell died in Italy July 17, 1918. Primarily a botanist, he was greatly interested in the rock-cuttings of the Maritime Alps. His *Guide to the Prehistoric Rock Engravings of the Italian Maritime Alps* appeared in 1913 (Bordighera; 46 pls.). He left his archaeological museum to the town of Bordighera, other collections to the University of Genoa. (S. R., *R. Arch.* IX, 1919, p. 394; cf. *B. Pal. It.* 1918, p. 140.)

Xavier Charmes.—Xavier Charmes, born at Aurillac November 23, 1849, died at Paris May 5, 1919. Not an archaeologist by profession, but engaged in the administration of public instruction, he was chiefly instrumental in the reform of the Comité des Travaux historiques et scientifiques and the creation of the French institute of archaeology at Cairo, the permanent mission in Tunisia, and the mission in Susiana. (S. R., *R. Arch.* IX, 1919, pp. 392 f.)

Victor Commont.—Born at Péronne in 1866, Victor Commont, professor in the normal school at Amiens, died at Abbeville, April 4, 1918. He was devoted to geology, palaeontology, and prehistoric antiquity. His numerous articles on these subjects are scattered in various publications. (S. R., *R. Arch.* IX, 1919, p. 197.)

Gustavo Frizzoni.—Gustavo Frizzoni was born at Bergamo August 11, 1840, and died at Milan, February 10, 1919. He was a protégé and follower of Morelli, whose works he edited. He was the author of numerous articles, some of which were collected in a volume, *Arte italiana del Rinascimento* (1891), and a catalogue of the galleries of Bergamo. He left a fine collection of early paintings. (S. R., *R. Arch.* IX, 1919, p. 395.)

Georges Lafenestre.—Born at Orléans, educated at Paris, Georges Lafenestre died at Bourg-la-Reine, March 19, 1919, at the age of 82 years. He had been successively conservator of paintings at the Louvre, professor in the École du Louvre, then at the Collège de France, member of the Académie des Beaux-Arts, and conservator of the Musée Condé at Chantilly. He was primarily a poet, but also a critic of art possessed of wide knowledge and excellent taste. He was the author of illustrated works on Titian, Fouquet, Italian painting (his best work, but not completed) and St. Francis. His articles on French and Italian *primitifs*, his numerous *Salons*, and the series *La Peinture en Europe* (in collaboration with Eugène Richtenberger) all testify to his taste and knowledge; but he lacked scientific education, and he made no important discoveries. (S. R., *R. Arch.* IX, 1919, p. 396.)

Luigi Misciatelli.—The accomplished and courteous prefect of the apostolic palaces (since 1905), Mgr. Luigi Misciatelli, to whom are due several improvements in the arrangement of the collections in the Vatican, died at Rome, October 21, 1918, at the age of 67 years. (X., *R. Arch.* IX, 1919, p. 395.)

W. Max Mueller.—Professor W. Max Mueller, Assistant Professor of Egyptology at the University of Pennsylvania and also Professor at the Philadelphia Divinity School, died of heart failure in the surf at Wildwood Crest, New Jersey, July 12, 1919. He was born at Gleisenberg, Germany, May 15, 1862, studied at the Universities of Erlangen, Leipzig, Berlin, and Munich, receiving the degree of Ph.D. at Leipzig. He published a large number of articles on Egypt and Western Asia, and the following books: *Asien und Europa*

(1893); *Die Liebespoesie der Alten Aegypter* (1899); *Egyptological Researches*, 3 vols. (1906-1919) published by the Carnegie Institution as the result of three trips to Egypt; *Egyptian Mythology* (1918). He left much important material in manuscript—W.N.B.

Charles Fairfax Murray.—The great English connoisseur and constant benefactor of the Fitzwilliam Museum at Cambridge, Charles Fairfax Murray, died January 25, 1919. (S. R., *R. Arch.* IX, 1919, p. 395.)

Giuseppe Pellegrini.—On December 2, 1918, Professor Giuseppe Pellegrini died at Este from fever contracted while working at a Bronze Age site at Feniletto. He was born at Loreto, March 10, 1866, and studied at the University of Bologna. He was at different times connected with the museums of Bologna, Florence, Naples, and Ancona, and since 1907 was Professor of Archaeology at the University of Padua. He took part in many excavations and published many archaeological papers, especially in *Not. Scav.* (F. BARNABEI, *Not. Scav.* XV, 1919, pp. 207-209).

Charles Ravaisson-Mollien.—Charles Ravaisson-Mollien died in May, 1919. He had been conservator adjunct of ancient sculpture in the Louvre. He had studied carefully the ancient statues, and was the author of most of the labels on the pedestals. He also published (six folio volumes, 1880-1891) the manuscripts of Leonardo da Vinci in the Louvre. He was the author of a limited number of articles in the *R. Arch.* and other periodicals. (S. R., *R. Arch.* IX, 1919, p. 394.)

Adolphe-Joseph Reinach.—In *R. Arch.* IX, 1919, pp. 191-193, is a notice by SOLOMON REINACH of his nephew, Adolphe-Joseph Reinach, who fell in battle, August 30, 1914. Born at Paris in 1887, he took advantage of all possible opportunities for education. As a member of the School at Athens he showed unusual ability. The list of his writings, which is included in the notice, is evidence of remarkable fertility of thought, not merely of exceptional industry. His death is a great loss to classical scholarship.

Pierre-Henri Requin.—The Abbé Requin, conservator of the Museum of the Popes, at Avignon, died toward the end of 1917. He made important discoveries relating to the history of art in the county of Venaissin during the Renaissance. He was the author of a *Histoire de la faïence de Moustiers* (only Vol. I) and a *Dictionnaire des artistes comtadins*. (X, *R. Arch.* IX, 1919, p. 394.)

Teresio Rivoira.—One of the most original of writers on architecture, Teresio Rivoira, died March 3, 1919, at the age of 68 years. His great work, *Architettura Lombarda*, appeared in 1901 and was translated into English by G. M. Rushforth (1910). Rivoira finds the origin of the mediaeval architecture of western Europe not in the East, but in Rome and northern Italy. In 1914 he published his *Architettura Musulmana*, and at the time of his death was finishing a general history of architecture in Italy to the seventeenth century. (Mrs. EUGÉNIE STRONG, *London Times, Literary Supplement*, March 27, 1919; *R. Arch.* IX, 1919, p. 396.)

Antoine Héron de Villefosse.—In *R. Arch.* IX, 1919, pp. 381-390, is an obituary notice of Héron de Villefosse by S. REINACH, with a selected list of his most important writings. Antoine-Marie-Albert Héron de Villefosse was born December 8, 1845, and died June 15, 1919, at Paris. Upon leaving the École de Chartes in 1869 he was made attaché in the department of antiquities of the Louvre. He became conservator in 1886 and retired with the title of

director in 1918. He was active in caring for the treasures of the Louvre in 1871 and also in the great war of 1914-1918. His activity as epigraphist and scholar was great in France and in the African colonies. He was honored by learned societies and the government, not only in France, but in other countries as well. His writings are numerous and important, lacking perhaps in creative imagination, but scholarly, accurate, and sound. The unfortunate purchase of the "tiara of Saitaphernes" is almost the only error he committed in his long and beneficent career.

PAPHOS.—A Tetradrachm of Nicocles of Paphos.—In *Num. Chron.* 1919, pp. 64-65 (fig.) E. T. NEWELL records the discovery (by F. M. Endicott) of the name ΝΙΚΟΚΛΕΟΥΞ (doubtless the famous king of Paphos) engraved in minute letters on the locks of the lion-skin headdress of Heracles on a coin of the Alexander-type. This should be the first instance of any ruler except Alexander himself, or his immediate successor, Philip III, venturing to put his own name in full upon coins of this type. It was doubtless an early assertion by the Paphian monarch of his independence.

PERINTHUS AND SELYMBRIA.—A Collection of Antiquities.—A catalogue of the stone monuments belonging to A Stamoulis of Silivri, the ancient Selymbria, is published by G. SEURE in *B. C. H.* XXXVI, 1912, pp. 534-641 (51 figs.). The collection has been gradually gathered since 1859, and is almost wholly composed of objects from the region on the Propontis about Perinthus and Selymbria. It has small artistic value, but is important from the unity of provenience. There is very little from pre-Roman times and nearly one-fourth of the monuments are Byzantine. They are divided into five groups: monumental sculpture; honorary and official monuments; votive monuments, including fifteen examples of the Thracian horseman; sepulchral monuments; indeterminate fragments. There are in all 106 numbers. All the sculpture and the more important inscriptions are reproduced, and a full bibliography is given for those previously published, about one-fourth of the whole. The bronzes and seals have been reserved by the owner for publication by a society in Constantinople.

ROUMANIA.—Recent Discoveries.—In *Arch. Anz.* 1915, cols. 236-270 (19 figs.) V. PÂRVAN publishes plans and photographs of the Roman camps at Ulmetum and Histria (Istriopolis) with a number of the more important Greek and Latin inscriptions, dating from the first to the sixth century, which illustrate history and antiquities. At Costanza also much has been learned by recent excavations about the ancient Tomi. The Greek colony of Histria was placed, like that at Syracuse, upon an island close to a peninsula. Among the recent single finds, most of which are in the National Museum at Bucharest, are a marble head from a Roman portrait statue, of heroic size, from Silistra (Durostorum) and a new piece of the Aristagoras inscription from Histria, which names further public honors and shows that the whole document was longer than has been supposed.

THRACIAN CHERSONESE.—Recent Discoveries.—In *B. C. H.* XXXVI, 1912, pp. 275-352 (2 pls.; 21 figs.) C. PICARD and A. J. REINACH publish the results of a visit in 1910 to the Thracian Chersonese and the islands of Imbros, Lemnos, and Samothrace. The route led through Sestos, Koila, Madytos, and Elaëus in the Chersonese. One Latin and six Greek inscriptions are published and a number of small objects described. On Imbros and Lemnos details:

supplementary to the collections of Friedrich are noted, including additional inscriptions. The most important of these is an archaic Attic inscription of the first quarter of the fifth century which seems to prove the presence of Athenian cleruchs on the island before 476 B.C. On Samothrace the site of the Nike was examined, but no excavation was attempted. *Ibid.* p. 670, the authors add a number of minor corrections.

SYRIA AND PALESTINE

JERUSALEM.—A Small Graeco-Roman Treasure.—In *C. R. Acad. Insc.* 1919, pp. 382–386 (fig.) S. REINACH publishes the contents of a sarcophagus recently presented to the Louvre. It was discovered in December 1899 with three other sarcophagi while the foundations were being dug for a storehouse near the school of the Israel Alliance at Jerusalem. The others had been plundered, but this was intact and contained the skeleton of a woman and the following objects: 1, two pieces of a long plain gold band which probably served as a headband; 2, a gold button ornamented with the head of Medusa; 3, a gold necklace with clasp, consisting of two garnets set in gold and twenty-six others cut in the shape of flattened double cones; 4, a gold pendant in the shape of a ring to which were attached a key, a tiny amphora, a basket, a lamp, and a pomegranate, all of gold; 5, a gold ring with a youthful male head cut on the seal; 6, three pieces of a silver vase; 7, a piece of coarse red pottery. The garnets of the necklace are Syrian. The contents of this tomb have been kept in hiding since their discovery. The objects are all Graeco-Roman.

ASIA MINOR

AEOLIS AND IONIA.—Inscriptions.—In *B. C. H.* XXXVII, 1913, pp. 155–246 (8 figs.) A. PLASSART and C. PICARD publish or discuss fifty-three inscriptions studied during a trip in Asia Minor in 1912. The stones are from Cyme and Myrina in Aeolis, and Clazomenae, Teos, Chios, Colophon, Notion, and Smyrna in Ionia. Thirty-two are published for the first time; the texts of the others are corrected or explained. Among the new texts are a considerable fragment of a law and two decrees of proxeny in Aeolic from Cyme; part of a lease from Clazomenae; a fragment of a *lex sacra* from Chios concerning the distribution of the parts of the victim; and a fragment of an honorary decree from Colophon, which gives for the first time the formulae there used. *Ibid.* pp. 448–449, the authors add notes and corrections, and J. KEIL identifies a fragment as part of the sacrificial calendar of Erythrae, two fragments of which were already known.

CNIDIAN CHERSONESE.—Inscriptions.—In *B. C. H.* XXXVI, 1912, pp. 529–533 (fig.) N. D. CHABARAS publishes eight more short inscriptions from the Cnidian Chersonese (see *Ibid.* XXXIV, 1910, pp. 428 ff.; *A. J. A.* XV, 1911, p. 410). One is on a small cup, the others are sepulchral, so far as their nature can be made out. *Ibid.* p. 667, J. HATZFELD adds a note to show that an inscription in the first article contains the name of C. Julius Theopompus, a Cnidian who obtained the *civitas libera* for his fellow-citizens from Caesar in 48 B.C.

COLOPHON.—The Sanctuary of Apollo Clarius.—In 1904 and 1907 trial excavations were conducted near the site of Colophon and the oracle of Apollo

Clarius. In 1913 the work was resumed with the aid of the French School at Athens, and in *B. C. H.* XXXIX, 1915, pp. 33-52 (2 pls.; 5 figs.) T. MACRIDY-BEY and C. PICARD summarize the results of the short campaign. Work was confined to the spot which was supposed to mark the site of the temple, but the building turned out to be merely the Propylaea, which were adjoined by a large exedra. The Propylaea were prostyle with four columns on the outside, and distyle *in antis* inside the temenos. There were three entrances in the central wall. About 125 inscriptions were found, the majority *in situ*. They are chiefly the records of the delegations sent to consult the oracle from many cities, for the most part in Asia Minor. The oracular grotto in the neighboring hills was also explored, and yielded pottery extending from primitive sherds such as are found in Troy I to Attic, Hellenistic, and Roman wares.

DASCYLIIUM.—**Graeco-Persian Reliefs.**—In *B. C. H.* XXXVII, 1913, pp. 340-357 (2 pls.; 8 figs.) T. MACRIDY publishes three fragmentary reliefs found in 1907 and 1910 at Erghili near Panderma, in the region where Munro places the ancient Dascylium. The first represents in front a procession of three women on horseback with two attendants on foot, with apparently a similar group on the left end, and Persian horsemen on the right. The second shows a Persian sacrifice, and the third another procession of Persian horsemen, differing somewhat in style from the first relief. In spite of these stylistic differences it seems clear that we have here the work of Greek artists under Persian influence, executed during the last part of the fifth century, probably for the satrap residing at Dascylium. *Ibid.* p. 358, the author publishes a Hellenistic relief, representing a funeral banquet, with a fragmentary inscription from the same neighborhood.

RHODES.—**New Stamps from Amphorae.**—In *B. C. H.* XXXVIII, 1914, pp. 300-326, J. PARIS publishes 262 stamps from amphorae in the collection of the *Scolastical des Frères des Écoles chrétiennes* at Rhodes, with brief notes. He also calls attention to certain synchronisms between the names of makers and of magistrates established by Rhodian stamps found in Athens and in Palestine.

GREECE

GREEK ARCHAEOLOGY IN 1914.—A summary of recent archaeological work in Greek lands was published by G. KARO in *Arch. Anz.* 1915, cols. 177-217. A large part of the work, both on new sites and in further study of old ones, was done by Greek officials and explorers and is reported in Πρακτικά, 'Αρχ. 'Εφ. and the new 'Αρχαιολογικόν Δελτίον. In Athens, the Odeum of Pericles, southeast of the Acropolis and near the precinct of Dionysus, has been thoroughly studied (see *A. J. A.* XIX, 1915, pp. 345 f.; XX, 1916, pp. 360 f.). The old mosque near the Library of Hadrian has been converted into a Byzantine museum. Some work was done by the Germans in excavating the region of the Ceramicus outside of the Dipylon gate (see *A. J. A.* XX, 1916, pp. 361 f.). On the Acropolis, the construction of the Nike temple and the arrangement of its frieze have been further studied; part of the eastern portico of the Propylaea, including the roof, has been rebuilt with the original stones; the two museums have been rearranged, connected, and a large number of pre-Persian votive bronzes put on exhibition, as well as some clay vessels and lamps. An inscription dated 276/5 B.C., found in the precinct of Artemis in Salamis, is a decree

of the worshippers of Bendis, similar to one already known, of the year 249/8. The name *Πυθμός* is noticeable. At **Sunium** a part of the roof and pediment of the temple of Poseidon has been rebuilt and the date fixed as soon after 450 B.C. In **Boeotia**, at the Ptoan sanctuary of Apollo, much has been ascertained of the history of the place and the construction of the temple. Originally of wood in the time of the archaic statues, it was rebuilt of poros stone with terracotta trimmings in the period 550-500, perhaps by the Pisistratidae; destroyed by the soldiers of Alexander the Great it was again rebuilt on the old plan by Cassander in 316. It was hexastyle with very long cella and no opisthodomos. At **Thebes** a woman's grave of the third century B.C. with its furnishings intact has been found. A herm of Heracles of the same period, with a curious metrical inscription was found at **Thespieae**. In **Eretria** a small temple *in antis*, dedicated to Isis and associated divinities was found in the area inside of an insula of houses. It belonged to a colony of Egyptian merchants settled there. The local museums at Chalcis, Tanagra, Thebes, and other places have been much improved by repairing and rearranging the objects exhibited, bringing others out of storage and in general systematizing the work. At **Orchomenos** the side chamber of the beehive tomb with the famous spiral net pattern has been reconstructed with the original stones, the thin facing slabs of the walls, also ornamented in relief, alone being too much broken to be set up. At **Demetrias** in Thessaly inscriptions and many terracotta statuettes, mostly of the type of the Praxitelean Aphrodite were found in the sanctuary of Pasicrata, who is thus shown to have been identical with Aphrodite, not with Artemis. The cult originated in Pagasae and was transferred to Demetrias with the inhabitants. The graves to which the painted stelae belonged, all later than 250 B.C., were found underneath still later Roman graves. The painted stelae themselves have been rearranged in the museum at Volo. At **Dimini** two beehive tombs were opened and found to contain skeletons, geometric pottery, and other objects. In Macedonia, the ruins of the ancient capital **Pella**, have been explored. There are some underground rock-cut chambers, also a large house built in Hellenistic times and burnt down about the time of the Roman occupation in 168 B.C. The coins date from Philip II to the Romans. Not much has been found at **Salonica**, but some late Roman graves yielded brightly painted terracotta figurines, coins, and two Charon's pennies of gold. Of the fragments of sculpture gathered in the local museum, a small statue of Hermes with the ram and an archaistic relief of a girl may be noticed. At **Dion**, a street, a theatre, a temple, and a paved agora have been found, and many inscriptions including a document of Philip V, a hymn to Asclepius, and both Greek and Roman grave-stones. At **Philippi** the French have excavated the necropolis and the theatre. The latter, the oldest part of which is of the time of Philip II, is very large and has the orchestra lower than the front row of seats. Among the inscriptions is a dedication to Isis made by a "*medicus ex imperio pro salute coloniae Iuliae Philippensis*." The worship of Sylvanus is also recorded. In the newly liberated part of **Epirus** a small amount of work was done in 1914, and some inscriptions were published. Two very ancient Christian churches in Nicopolis were excavated and identified. At **Thermon** in Aetolia two distinct strata of remains are found below that of the seventh century temple. The lowest is a settlement, of the second millennium B.C., of round and elliptical houses with one

triangular house, containing Mycenaean and local pottery and no iron. Above it is a thick layer of the débris of sacrifices mixed with geometric sherds and bronzes and a few iron weapons. This definitely establishes the sequence of the Mycenaean Bronze Age and the geometric Iron Age. The stratification and many of the objects found are like those at Olympia, but here the continuity has not been broken by an inundation such as buried the older remains there. Two of the largest elliptical buildings (22 m. and 21.5 m. long) are divided by cross walls into three chambers, and one of them has the stone bases for an exterior ring of columns, perhaps not an original part of the building but still the oldest known example of this feature. This building was standing until toward the year 600 B.C. when it was succeeded by a rectangular temple of the same dimensions, the oldest temple of Apollo. Of the buildings under the temple one was probably the palace of the second millennium B.C. and the next one, of the beginning of the first millennium, was built after the revolution which drove out most of the royal families from Greece, and was the oldest temple in Greece. It is at least the oldest well-preserved building of the geometric period. At **Corfu** remains were found of a sixth century house having an inner court surrounded by a Doric colonnade. At **Cephalonia** a second rock-cut tomb has been opened, and small articles of gold, bronze, and glass and late Mycenaean pottery found. Graves of the fifth and following centuries contained few remains of the original furnishings. Terracottas and other objects from a temple of which the foundations have not been found, show a dependence upon Elis, at least in the fourth century. At **Olympia** the German Institute has repaired and improved the museum building. The channel of the Cladeus has been regulated and a great deal has been done, especially in the northeast part of the site, in clearing up the scattered fragments of stone and placing them, so far as possible, in or near the buildings to which they belong. It was hoped to finish the Altis in 1915. At **Nauplia** a museum has been established in the old mosque and objects found at Tiryns brought there. Excavations on the island of **Cythera** have yielded pottery of the second and third Late Minoan periods, and a steatite vase with engraved spiral net pattern. Further exploration here is expected to furnish some missing links between Minoan and Mycenaean—*island and mainland*—art and culture. In **Crete** an important beehive tomb was opened at Platanos, southwest of Gortyna, which showed in the lowest stratum burnt offerings and gold and copper articles, but no evidence of cremation of bodies. In an upper stratum were unburned bodies and a rich treasure of offerings of gold, copper, ivory, and stone. Some have analogies in early dynastic Egyptian remains and many of the stone vases resemble in fineness and beauty, the art of Mochlos. At **Gurnes**, southeast of Cnossus, were graves of the transition between Early and Middle Minoan and some rough hand-made pots not like anything else known in Minoan art. At **Psychro**, near the cave which has been wrongly called the Dictæan grotto of Zeus, the British School has excavated a small Minoan town of Late Minoan I-III, which has the best preserved town plan that has been found. There are groups of houses on three sides of an open square. Archaic Greek remains lie above the Minoan, but entirely separated, as by a period of desolation between the two occupations. A beehive tomb is in the necropolis. Some excavation has been begun in Western Crete, at **Rhathymnos**, at **Atrepas** (children's graves of L. M. III, with the bodies in earthen jars and offerings of

small vases), at **Axos** (some 200 terracottas from a sanctuary of Demeter, ranging from the fifth century to Roman times), and at **Eleutherna**, where an ancient stone bridge with a pitch of 45° is still in use. In a necropolis of the sixth and fifth centuries in **Chios** the burials are in terracotta sarcophagi shaped like those of Clazomenae but unpainted. At **Phanae**, on the southern point of the island, some 50 Chian silver coins were found and the peribolos wall of a precinct of Apollo. The earlier seventh century temple has disappeared, but there are remains of the temple of 550-500, which was left unfinished like the Heraeum at Samos. This is a promising field for future work. Details of an elaborate small Ionic temple much like the Treasury of the Ionians at Delphi were found in the neighboring village of Pyrgi. The French have been active at Delphi, Delos, and Thasos, as well as in Macedonia.

ARGOS.—**The Treaty between Cnossus and Tylissus.**—In his earlier excavations at Argos W. VOLLGRAFF found, and published in *B. C. H.* XXXIV, 1910, pp. 331 f., part of a treaty between the Cretan cities of Cnossus and Tylissus, evidently made through the arbitration or mediation of Argos (cf. *A. J. A.* XIX, 1915, p. 349). In 1912 he discovered another considerable fragment joining the top of the first stone. It is published with a translation and commentary, in which are included further notes on the first fragment, in *B. C. H.* XXXVII, 1913, pp. 279-309 (pl.). At the end of the article are a number of brief notes on previously published Argive inscriptions.

ATHENS.—**Recent Discoveries.**—In *C. R. Acad. Insc.* 1919, pp. 28-37 J. SVORONOS announces three important archaeological discoveries, all of which are concerned with numismatics. 1. G. Sotiriou has discovered in Elis the location of the mint established in 1246 by Guillaume I de Villehardouin. It was in the donjon of the Frankish fortress Clairmont. 2. In the fort at Cape Sunium the ancient mint known as that of the hero Stephanephoros has been found. An archaic relief representing the hero in the act of placing the crown on his head came to light and will soon be published. 3. A small gold coin, of which a variant was previously known, has recently been discovered in Athens. It is $\frac{2}{3}$ of a hekte, and belongs to the series of gold staters which have a sacred basket as a symbol in the field. Instead of having the head of Athena as its type it has an aegis decorated with the Gorgon's head. In style it is identical with the silver coins of Demetrius Poliorcetes. In 296-294 when Demetrius was besieging Athens the tyrant Lachares melted down the sacred treasure of the Athenians for money. This treasure consisted chiefly of one hundred baskets of gold accumulated by Lyeurgus and the gold, particularly the aegis, of the Athena Parthenos. Svoronos argues that the series of gold coins was made at this time, and that in the two little coins bearing the aegis we have some of the gold which once formed part of the aegis of the Athena Parthenos of Phidias.

Attic Inscriptions of the Imperial Period.—In *B. C. H.* XXXVIII, 1914, pp. 351-443 (22 figs.) P. GRAINDOR comments on thirty-seven Attic inscriptions of the imperial period, including fifteen hitherto unpublished. Five relate to Herodes Atticus and his family; eight determine with greater precision than has been possible the dates of several archons; four relate to Hadrian. The commentary is very detailed, dealing with the text, the personages named, chronology, and the correction of the views advanced by earlier editors.

The French School in 1917-18.—In *C. R. Acad. Insc.* 1919, pp. 162-180 T. Homolle reports upon the activities of the French archaeological schools at

Athens and at Rome during the year 1917-18. In Greece the inscriptions at Delphi were studied, and at Delos some interesting discoveries were made such as the complete line of the wall of Triarius erected against the pirates in 69, several new streets near the theatre, and scanty remains of the Hippodrome. Archaeologists coöperated with the French army at Salonica. In this connection a thorough study of the monasteries of Athos was undertaken and thousands of photographs made. At Rome two members of the school remained and a report of their studies is given.

DELOS.—Excavations in 1912-1913.—During 1912 the French campaign at Delos was partly devoted to examining the Stadium near the Gymnasium excavated in 1911, partly to clearing the Jewish synagogue south of the Stadium (see A. Plassart, *Mélanges Holleaux*, pp. 201-215; *R. Bibl.* XI, 1914, pp. 523-534), and partly to excavating a series of private houses east of the Stadium, which were further studied during the next year. The results are fully described in *B. C. H.* XL, 1916, pp. 145-256 (plan; 43 figs.) by A. PLASSART, who directed the work in company with the late Charles Avezou (killed in action in the East in 1915). Five houses in one insula and two in another, with their adjacent shops, were completely cleared, as well as the streets bounding them. They show the usual construction and the general character of the houses excavated elsewhere on the island. All but one are built around courts and are more than one story high, but none are of special magnificence. It is possible that the one story building, which has a peculiar plan may not have been a dwelling, but its use is unknown. Nothing indicates that the buildings are earlier than the Graeco-Roman period, and, apart from the Jewish synagogue, the quarter seems to have been unoccupied after the sack by Mithridates in 88 B.C. Each house and shop is described in detail. Against the wall at the entrance of one house is an altar, and both the altar and the wall adjacent are decorated with the most important series of liturgical paintings yet found on Delos. It includes a libation, the sacrifice of a pig, scenes from contests, apparently in honor of the Lares and Genius of the family, and a large painting of Heracles. This house was occupied in the first century by an Italian, Q. Tullius Q. f., as is shown by an inscription in Greek and Latin on the base of a (lost) statue erected by three of his freedmen. Other houses were also decorated with paintings, all of which are noted with great precision. The only sculpture worthy of note was a Hellenistic herm with the head of a youthful satyr. A novelty in Delos is a large and deep (*ca.* 6.15 m.) well with a subterranean staircase leading down the interior to the water. When discovered the water was 1.50 m. deep, and reached to the twenty-third step.

Inscriptions from the Gymnasium.—Thirty-one inscriptions found in or near the Gymnasium of Delos are published in *B. C. H.* XXXVI, 1912, pp. 387-435 (pl.; fig.) by A. PLASSART. Eight date from the period of independence, the rest from the second Athenian rule. Among these latter is a list of fifty-six gymnasiarchs from 166/5 to 112/1 B.C. The office is annual but it appears that in one year there were two incumbents. Among the numerous dedications is one of Ptolemy X, Soter II, dated in 111/0 B.C., in which the king calls himself eldest son of Euergetes II, showing that he adopted this title before 108 B.C., the accepted date. *Ibid.* pp. 436-438, P. ROUSSEL dates the beginning of the list of gymnasiarchs in 167/6, doubts two officers in one year, and discusses the change made in 142/1, when the gymnasiarch was

chosen by the governor of the island and the frequenters of the Gymnasium, that is, the greater part of the free male population. *Ibid.* pp. 661-666. A. PLASSART and C. AVEZOU add five inscriptions, including one copied by Ciriaco of Ancona, to the inscriptions from the Gymnasium.

DELPHI.—New Inscriptions.—In *B. C. H.* XXXVIII, 1914, pp. 21-37 (5 figs.) G. BLUM publishes three inscriptions found at Delphi in 1912-1913. The first, a mere fragment, is part of a dedication by Attalus, and confirms the attribution to this king of the East Portico and its terrace. The second is apparently a fragment from the base bearing the statues of the Aetolian generals (Paus. X, 15, 2). The third is a long decree of the Amphictyonic Council in honor of Nicostratus of Larissa, who had been hieromnemon and ambassador to Rome. It is dated in 184-183 B.C. and throws light on the reconstitution of the Council in its traditional form and the relations of Athens and other Greek states to the Council and to Rome.

ORCHOMENOS (ARCADIA).—Excavations and Inscriptions.—In *B. C. H.* XXXVIII, 1914, pp. 71-88 (3 pls.; 16 figs.) G. BLUM and A. PLASSART describe briefly the results of a short excavation in 1913 at Orchomenos in Arcadia. In the upper city the terrace of the Agora was found to contain a long stoa on the north side and at a right angle to this on the east a rectangular hall, probably the Bouleuterion. On a lower terrace the temple and altar of Artemis Mesopolitis were cleared. Farther north the foundations of a rectangular structure were discovered, and beyond this the theatre was partially excavated. In the lower town the foundations of a Doric hexastyle peripteros, 100 feet long and dating from the end of the sixth century, were uncovered. The smaller objects found included an archaic Dionysiac relief, small bronzes, and terracottas. The excavations confirmed the statement of Pausanias (VIII, 13, 2) that in his day only the lower town was inhabited. *Ibid.* pp. 447-478 (12 figs.), the same authors begin the publication of the inscriptions discovered by them. These include the partially erased dedication on the base of a statue of Areus, king of Sparta, and a number of votes of proxeny, inscribed on small bronze tablets found for the most part in the "Bouleuterion." The publication of the inscriptions is continued *ibid.* XXXIX, 1915, pp. 53-134 (4 figs.). A stele found in the temple of Artemis Mesopolitis contains a minute description of the boundary between Orchomenos and Methydrium, but unfortunately none of the landmarks used can be identified. In view of the political situation the probable date of this agreement is 369 B.C. The dialect of the inscription is treated in great detail. The excavations also brought to light the upper part of the cippus containing the treaty between Orchomenos and the neighboring Euaemon (*I. G. V*, 2, 343). It shows that the document was continuous, commencing on the front of the stone, continuing on the left face, and concluding on the right. It may be dated about 360-350 B.C. The text of both new and old fragments is printed with a translation and commentary. Five fragmentary inscriptions are also published, and a complete list of the coins found or bought during the excavations. The article concludes with additional notes on the inscriptions published before and historical comments on the decrees of the Aetolian league found at Thermon and published by G. Soteriades in *Ἀρχ. Δελτ.* II, 1915, pp. 45-58.

PHARSALIA.—A Cave of the Nymphs and Chiron.—In *B. C. H.* XXXVI, 1912, pp. 668-669, N. I. GIANNPOULOS announces the discovery on the moun-

tain Prasinovouni near Pharsalia of a cave which an inscription shows was dedicated to the Nymphs and Chiron. *Ibid.* XXXVIII, 1914, p. 479, A. S. ARVANITOPOULOS points out that he discovered the inscriptions on rocks near Pharsalia and published an account of them in *Πρακτικά*, 1910 and 1911.

PHOCIS.—*New Inscriptions.*—In *B. C. H.* XXXVII, 1913, pp. 443–446, C. AVEZOU and G. BLUM publish seven inscriptions from various sites in Phocis. All are short and fragmentary, except a stele from Hyampolis containing two decrees of proxeny in favor of Orchomenians.

TEGEA.—*New Inscriptions.*—In *B. C. H.* XXXVI, 1912, pp. 353–386 (12 figs.) K. A. ROMAIOS publishes with a full commentary fourteen inscriptions found at various times near Tegea. They include an archaic fragment of the end of the sixth century, a bronze foot bearing the words Πολέας έπολες, an architectural fragment with specifications about an *εφοδος*, a long but badly damaged fragment of a *lex sacra*, lists of names, and honorary and votive inscriptions.

ITALY

CAVA DEI TERRENI.—*A Hoard of Coins.*—In 1907 a hoard of coins was found at Cava dei Terreni by a peasant. He disposed of some of them, and of these ninety Greek coins and forty-seven pieces of *aes grave* were published in *Not. Scav.* for 1908, pp. 84–85. The rest were seized by the carabinieri and, since the trial and condemnation of the finder, have been in the possession of the tribunal of Salerno. They are now transferred to the Naples museum and an account of them is given *ibid.* XV, 1919, pp. 268–269 by M. DELLA CORTE. They are seventy-five in number and, with the exception of three Roman coins, are from Campanian and Sicilian towns; twenty-six are from Paestum.

ESTE.—*Miscellaneous Discoveries.*—In the park of the Countess Albrizzi at Este numerous ruins of walls were found, with fragments of tiles, one of which was stamped with the name of C. Corelius Celer; also a tragic mask of Luna marble, and other fragments in marble. The most important find consisted of three handsome mosaic pavements of rooms the walls of which had entirely disappeared. One of these had in its centre a picture of a vase with handles, resembling a crater, above which was the inscription, *salvis amicis felix hic locus*. (ALFONSO ALFONSI, *Not. Scav.* XV, 1919, pp. 259–261.)

FONTANA ELICE.—*Miscellaneous Antiquities.*—In *Not. Scav.* XV, 1919, pp. 263–265, A. NEGRIOLI reports the discovery at Fontana Elice of five or six tombs of the Villanova period and seven of the Roman period, along with various antiquities: fibulae, and fragments of pottery and terracotta.

GRIZZANA.—*An Etruscan Tomb.*—In *Not. Scav.* XV, 1919, pp. 266–268, A. NEGRIOLI reports the discovery of an Etruscan tomb of the middle of the fifth century B.C., with vases.

IMPRUNETA.—*An Early Etruscan Sanctuary.*—In *Not. Scav.* XV, 1919, pp. 210–215, E. GALLI gives an account of the discovery, in the fall of 1917, of a very early Etruscan sanctuary at Impruneta, in the province of Firenze. In connection with the excavations there were found some Roman coins, fragments of pottery, and three small bronze figures, dimensions not given, called by the writer Apollo, Aphrodite, and Mars; also a bronze foot belonging to a larger statue.

MAGRE.—A Pre-Roman Sanctuary.—In *Not. Scav.* XV, 1919, pp. 169–207 (32 figs.), G. PELLEGRINI describes the discovery of a pre-Roman sanctuary at Magre (Vicenza), about a kilometer southwest of Schio, on an isolated hill. Attention was called to the site by the chance discovery of pieces of stag-horn inscribed with primitive characters, and part of a leaden bar. Systematic excavations were made in 1912, but a full report is now given for the first time. What appears to be the *favissa* of a temple was unearthed and numerous objects in bronze and stone were found. Most interesting of all are the stag-horns, of which thirteen are entire and eight others in a fragmentary condition, suggesting a cult of Artemis-Diana. The horns are inscribed in the Venetic alphabet with one or two noteworthy peculiarities of an archaic nature. The language, however, is not Venetic. It is a dialect strongly affected by Etruscan influences and was the language of a people who may have been the direct descendants of the Euganei.

MONTEVEGLIO.—Bronzes of the Villanova Period.—In *Not. Scav.* XV, 1919, pp. 262–263, A. NEGRIOLI reports the discovery at Monteveglio of bronze objects of the Villanova period, for the most part in fragments.

OSTIA.—An Important Inscription.—In *Not. Scav.* XV, 1919, pp. 223–245, G. CALZA tells of the discovery of an important inscription, found in fragments in a late wall near the temple of Vulcan. The inscription consists of two parts, of which the larger gives a list of the *quinquennales* of a *collegium*, and the smaller, the *curatores* of the same college. The inscription contains more than two hundred names, of which one hundred and ninety-eight can readily be deciphered or restored. They are arranged under consuls, beginning in the first list with Ti. Claudius Severus Proculus and C. Aufidius Victorinus of 200 A.D. The list is not complete but comprises the years 200, 210, 218, 228, and 237. The list of *curatores* is for the years 193, 194, and 201. The names of the consuls are in larger letters, as are also those of the regular *quinquennales*. Besides the latter there are under each year numerous *quinquennales d(ecreto) d(ecurionum)*, and it is conjectured by the writer that the latter office was a preliminary to the former. The list is not an *album*, but *fasti*, perhaps of the Seviri Augustales.

REGGIO AEMILIA.—A Roman Tomb.—In *Not. Scav.* XV, 1919, pp. 261–262, A. NEGRIOLI reports the discovery near the railway station at Reggio Aemilia of a Roman tomb, containing a leaden ossuary, 15.5 cm. in height, with a cover of the same material 22.5 cm. in diameter, a lamp, three perfume bottles of glass, and a badly corroded bronze coin. Since the coin was inscribed "*tribunica potestate xxxix*" it must have been coined in the reign of Tiberius between June 27 of 36 A.D. and March 14 of 37. Coins, lamps, and another glass vase were found in the vicinity of the tomb.

ROME.—A Replica of the Maiden of Antium.—The Museo Nazionale delle Terme has recently acquired a small marble torso, 21 cm. high, which proves to be a replica of the Maiden of Antium. The head and the lower part of the body from above the knees are gone. It was found in 1903 between the Piazza Venezia and the Via Fornari. The figure when complete could not have been more than 40 cm. high, but as far as drapery and movement are concerned it is a faithful copy. A small serpent hanging from the right arm suggests that the statuette represented a Hygieia. No other replica of this statue is known. (C. ANTI, *Boll. Arte*, XIII, 1919, pp. 102–106; 5 figs.)

SARDINIA.—Recent Discoveries.—In *Not. Scav.* XV, 1919, pp. 285–331, A. TARAMELLI gives an account of exploration and research on the site of the ancient Cornus in Sardinia during May and June 1916, together with a history of the city. Twenty-four handsome glass vases of divers forms are described and illustrated. He also gives an account of the exploration of the remains of a Roman villa at Sisiddu, of a prehistoric necropolis at Fanne Massa with interesting tombs and numerous vases; further, of Punic tombs at the same place, in the region called Mussori, and at Furrighesus.

SOLFERINO.—Prehistoric Remains.—The collection of peat for fuel from beds which were formerly pools led to the discovery at Solferino of pile-work and other traces of prehistoric lake-dwellers. This part of the peat-beds will be protected and further excavations made. (G. PATRONI, *Not. Scav.* XV, 1919, pp. 257–259.)

SYRACUSE.—The Catacombs of S. Lucia.—In *Not. Scav.* XV, 1919, pp. 270–285, P. ORSI gives a detailed account of the exploration during 1916–1919 of the Catacombs of S. Lucia with a number of inscriptions and paintings.

VETULONIA.—A Roman Street.—In *Not. Scav.* XV, 1919, pp. 216–222, LUIGI PERNIER tells of the discovery of a Roman street and building at Costamurata, one of the three peaks of the elevation on which Vetulonia stands. The street, paved with polygonal blocks of limestone, ran from northeast to southwest and connected with a road of which traces had previously been found. Near by was a wall of large rectangular blocks of stone and other smaller walls belonging to a large room near which was the opening of an ancient well. There were also found fragments of pottery and terracotta, including part of a *puteal* of terracotta probably belonging to the well. The writer gives an illustration and description of a somewhat similar *puteal*, found at Vetulonia in 1898 and now in the museum at Florence.

VILLANOVA.—An Ancient Necropolis.—In *Not. Scav.* XV, 1919, pp. 253–257, PIETRO BAROCELLI gives an account of the discovery of an ancient necropolis at Villanova in October, 1919. Twenty-five tombs were found, none of which was larger than 1.40 by 0.50 m. They showed evidences of the so-called secondary burial, as did the neolithic tombs found at Montjovet in 1909. Their orientation is east and west.

VILLAZZANO.—A Villa with Sculptured Reliefs.—At Villazzano, on the road from Sorrento to Massalubrense, the remains of a large Roman villa have been found with a system of double stairways leading to an upper story. Its location suggests the villa of Pollio Felix (Statius, *Silv.* II, 2). In it a number of sculptures were found: a relief 1.80 by 1.30 m., representing, within a border of volutes of acanthus leaves and branches, a sacrifice to Diana. In the background are a pine, two quince trees, and an oak, typical of the country. Diana, facing to the left, is seated on a rock near the centre of the picture, with a lighted altar before her, and is receiving a sacrifice offered by three youths in tunics. The first of these is the priest, while the other two carry the materials for the sacrifice. Behind the goddess stand two older men, who are shown to be huntsmen by their costume and by the two lances which each holds in his hand. The figure of Diana is of the conventional type. She wears a short, high-girt tunic, with a crescent-shaped diadem on her head and richly ornamented shoes on her feet. A second relief, 1.75 by 1.05 m. and in a fragmentary condition, represents the triumph of Bacchus. The surviving portion shows a

satyr with a curved staff, who is leading the procession. He turns back to look at Silenus, who is riding upon a mule. In the foreground are seen the great heads of two panthers yoked together and at the bottom are the paws of the two beasts and traces of the car on which Bacchus rode. Another bit, restored by the writer from fourteen fragments, apparently belongs to the second relief. It shows the upper part of the figures of a satyr and a maenad. Near the fawn-skin across the satyr's breast is the left arm of a woman, and in the hand a small thyrsus. Other fragments of reliefs represent a group of satyrs approaching an altar, a river deity, and a handsome bell-shaped capital ornamented with acanthus leaves, behind which rise pointed, lance-shaped leaves. The borders and the portrait character of the heads suggest the Flavian period, while other characteristics point to the work of a local sculptor influenced by south Italian art. (A. LEVI, *Not. Scav.* XV, 1919, pp. 241-252.)

FRANCE

BETHISY-SAINT-MARTIN.—Roman Mile-stones.—In 1917 workmen widening the road between Bethisy-Saint-Martin (Oise) and the Gallo-Roman ruins of Champlieu discovered parts of four Roman mile-stones. There are thirty fragments in all, some of which still bear traces of red paint. Some letters were painted and not cut. These stones were grouped at the point where they were found at the end of the third century, and the erection of several at the same place was intended to show the allegiance of the town to the reigning emperor. The road was the Senlis-Soissons road. (E. ALBERTINI, *C. R. Acad. Insc.* 1919, pp. 46-55.)

RIVIÈRES.—A Latin Inscription.—In *C. R. Acad. Insc.* 1919, pp. 479-484, A. HÉRON DE VILLEFOSSE publishes a votive inscription in Latin recently discovered in the commune of Rivières (Charente). It reads *Julia Malla Malluroni fil(ia) numinibus Augustorum et deae Damonae Matubergnini ob memoriam Sulpiciae Silvanae filiae suae de suo posuit*. This inscription shows that the cult of Damona extended to western Gaul. There was probably a small sanctuary dedicated to local deities at the place where the inscription was found.

GREAT BRITAIN

LONDON.—A Fragment of the Frieze of the Parthenon.—The fragment from the frieze of the Parthenon found in 1901 in a rockery (*A. J. A.* VII, 1903, p. 390) has been presented to the British Museum by the owner, Mr. J. J. Dumville Botterell of Colne Park, Essex, and will soon be restored to its original position at the left upper corner of slab XXXV (Michaelis) of the north frieze. (*Boston Evening Transcript*, Aug. 27, 1919, from the *London Times*.)

New Greek Coins in the British Museum.—In *Num. Chron.* 1919, pp. 1-16 (2 pls.), G. F. HILL describes and illustrates some of the more important acquisitions of Greek coins made by the British Museum in 1917 and 1918. Among them is a new type of Metapontum, and a pale gold coin of northern Gaul, one of a hoard of ten discovered by some Canadian soldiers near Lens.

Antiquities from English Collections.—In March, 1919, Messrs. Spinck, of London, offered for sale a collection of antiquities from the Hope (Deepdene),

Peel, Kennedy, Clephan, Hilton Price, and other collections. A résumé of the illustrated catalogue, with notes and four drawings, is given by SALOMON REINACH in *R. Arch.* IX, 1919, pp. 198-201.

NORTHERN AFRICA

CYRENE.—**A Statue of Victory.**—About one kilometre southwest of Cyrene, on the site of the city of Balacrae, there have been found a number of inscriptions and votive sculptures which have been removed to the museum at Bengasi. Among them is a figure of Victory (Fig. 1) which has affinities with the Lemnian Athena of Phidias, but is probably an eclectic work carved in imperial Roman times. Although a piece of decorative sculpture it preserves something of the grandeur of the original which inspired it. (*Cron. B. A.* VI, 1919, p. 37; fig.)

KHAMISSA.—**A New Proconsul Africae.**—In *B. Soc. Ant. Fr.* 1917, pp. 190-192, C. PALLU DE LESSERT publishes an inscription recently found at Khamissa with the name of a new *proconsul Africae*, Valerius Severus. He appears to be the same man who was *legatus* of Lycia and Pamphylia in 130 A.D. He held many important offices.

RABAT.—**Punico-Roman Graves.**—In *B. Soc. Ant. Fr.* 1918, pp. 156-159. R. CAGNAT points out that several Roman or Punico-Roman graves have recently been discovered at Rabat in the Touarga quarter. Some were incineration graves constructed thus: below a slab was an amphora, or two amphorae, one fitted into the other, then the burial urn covered with a cup. The inhumation graves were constructed of three slabs of stone. Very little funeral furniture was found in any of these graves. The writer also calls attention to a Latin inscription recently found at Porte des Zaër in which *GN* is used as an abbreviation in place of the common *CN*.

VOLUBILIS.—**New Mosaics.**—Two mosaics have recently been found at Volubilis in a house between the forum and the arch of Caracalla. One, somewhat damaged, is 2.16 m. by 2.60 m. and depicts several men engaged in fishing. One man is preparing to cast a net. Two others near him are so broken that it is impossible to say just what they were doing. In the centre is a seated man fishing with a line and hook. A fish is biting at the hook while five others swim about it. Below the feet of this fisherman is a fish with snakelike body. A few letters of an inscription are preserved. The second mosaic came from an adjoining room and measures 1.77 m. by 2.11 m. A nude man is represented



FIGURE 1.—VICTORY:
CYRENE.

seated on a bay horse facing the tail. The horse is walking towards the right with its head lowered. It has for harness a collar and the upper part of a bridle. The rider clings to the horse's collar with his left hand and with his right holds up a cup by the handle. Above the horse's head and behind the rider is a long streamer. The scene appears to represent a victor with his prize. The drawing in both mosaics is poor but the subjects are portrayed in a rather lively fashion. They are the first mosaics with figures to be found at Volubilis. (A. HÉRON DE VILLEFOSSE, *B. Soc. Ant. Fr.* 1918, pp. 161-164.)

The Statuette of a Mounted Youth.—In *C. R. Acad. Insc.* 1919, pp. 56-59 (fig.), T. REINACH calls attention to a bronze statuette of a youth found by Lieutenant L. Chatelain at Volubilis in November, 1918. It is 49 cm. high and represents a youth who was evidently mounted on horseback, but the horse is missing. The hands are placed as if holding the reins. The statuette dates from the first half of the fifth century B.C. and is almost perfectly preserved, though somewhat oxidized. The headband suggests a victor in a horse race at some important festival.

UNITED STATES

CLEVELAND.—Classical Marbles.—In *B. Cleve. Mus.* VI, 1919, pp. 43-45 (4 figs.), L. G. ELDRIDGE publishes three Greek sculptures in the Museum. The latest of the three is a head of Aphrodite from Capri. A vague expression is given to the head by the incomplete working of the details, and comparison with the "Petworth Head" proves that the inspiration for the sculpture comes from Praxiteles. A fragmentary head, probably of the youthful Heracles, is an illustration of the realistic tendency of Hellenistic art; while the third example, a part of a circular altar or fountainhead, is decorated with a typical archaistic relief. The figures preserved on the piece represent Athena and perhaps Hermes, walking to the left. The museum also has some good examples of Roman decorative sculpture. Garden furniture, consisting of table, basin, and four herms, is said to have come from a villa which belonged to a certain Rectina, possibly the wife of the poet Cassius Bassus, who perished in the eruption of Vesuvius in 79 A.D. There is also a little stone urn decorated with putti, garlands, etc. (*Ibid.* pp. 72-74; fig.)

A Roman Mosaic Pavement.—In *B. Cleve. Mus.* VI, 1919, pp. 103-104 (2 figs.), F. A. W. publishes a mosaic pavement, of the first century A.D., of Roman workmanship which has recently been acquired by the Cleveland Museum of Art. The design is conventional and bears little similarity to any others known. The pavement is supposed to have been excavated from the villa of Livia.

NEW YORK.—The Treasure of Lahun.—In 1914 W. M. Flinders Petrie discovered at Lahun the tomb of the princess Sat-hathor-iunut, who was probably the daughter of Senusert II of the twelfth dynasty. In a recess in the tomb was found all of the princess's jewelry in perfect condition, except in so far as it had been injured by time. All but a few of the pieces discovered were acquired by the Metropolitan Museum. The most important object was a diadem (Fig. 2) consisting of a broad band of highly burnished gold over an inch wide and large enough to pass around the bushy wig of the period. In front was an uraeus of open work inlaid with lapis lazuli and carnelian. Around

the band were fifteen rosettes riveted to the band, into which was fitted a double plume of sheet gold the stem of which slipped through a gold flower. At the back and sides of the crown were streamers of gold which hung from hinges attached to the rosettes. The whole was over a foot and a half high. This diadem was retained by the museum at Cairo. There were also found two richly inlaid pectorals of the same design, one bearing the cartouche of Senusert II and the other of Amenemhat III. The latter was retained in Cairo. Other objects were a massive collar of large double lion-heads of gold with smaller quadruple lion-heads between; another collar or girdle of large gold cowries with rhombic beads of gold, carnelian, and green feldspar; a necklace of beads of gold, lapis lazuli, and carnelian which probably held one of the pectorals; another necklace of amethyst beads with two gold lion-claw pendants; a pair of deep armlets formed of six bars of gold each bearing two columns of thirty-seven rows of beads which held apart as many rows of minute beads of carnelian and turquoise, and bearing also the name and titles of Amenemhat III in blue and white on a ground of carnelian; also a similar pair of bracelets. Two pairs of small recumbent lions of gold and two pairs of larger gold lions may have been attached to the arms as amulets. Various other amulets of gold with colored inlay were found. The other objects were a pair of copper knives, a pair of copper razors with gold handles, three obsidian cosmetic vases with gold mounting on the brim, base, and lid, a large silver mirror with handle of obsidian richly inlaid, and with a head of Hathor of gold (retained in Cairo); two inlaid gold scarabs (one retained in Cairo), another of lapis lazuli, and a fourth of the same material engraved with the cartouche of Amenemhat III; and finally eight alabaster jars for cosmetics and unguents. The jewelry had



FIGURE 2.—DIADEM OF SAT-HATHOR-IUNUT: CAIRO.

been placed in three caskets, two of which were of ivory veneer and one of wood. The first two can be restored. The tomb had been plundered, but this jewelry lay undisturbed in the recess where it had been placed at the time of burial. In a recess at the right were four very fine canopic jars in a limestone box. (A. M. LYTHGOE, *B. Metr. Mus.* December, Pt. II, 1919, pp. 1-28; 26 figs.)

Statues of Sekhmet.—The Metropolitan Museum has recently acquired seven colossal diorite statues of the lion-headed goddess Sekhmet. They came originally from the temple of Mut at Karnak where they were set up by Amenhotep III, but were carried to England about 1830 and have recently been in the collection of Lord Amherst. In *B. Metr. Mus.* October, Pt. II, 1919, pp. 3-23 (22 figs.), A. M. LYTHGOE describes the many excavations in the temple of Mut and gives the history of the statues of Sekhmet since their excavation.

A Portrait of Herodotus.—The Metropolitan Museum has just discovered in its store-rooms an interesting life-size herm of Herodotus (Fig. 3). It was

acquired twenty-eight years ago and is said to have been found shortly before that time at Benha in Lower Egypt. Bernouilli records five portrait heads of Herodotus, but this one is as good as, if not better than, any of them. It was probably carved in the second century A.D., but goes



FIGURE 3.—BUST OF HERODOTUS: NEW YORK.

back to an original of the fourth century B.C. (E. R(OBINSON), *B. Metr. Mus.* XIV, 1919, pp. 171-173; 2 figs.)

PHILADELPHIA.—A Tanagra Figurine.—In *Mus. J. X*, 1919, pp. 20-25 (fig.), S. B. L(UCE) publishes a Tanagra figurine, 24.5 cm. high, representing a woman wearing chiton and himation, leaning gracefully against a pillar and playing double flutes. The subject is unusual. The figure is well preserved and retains much of its original color.

A Black-Figured Scyphus.—In *Mus. J. X*, 1919, pp. 15-19 (2 figs.), Miss E. F. R(AMBO) publishes a black-figured scyphus recently acquired by the University Museum. Heracles is depicted on one side brandishing an axe over Nereus, who is running away, as are two Nereids. On the other side appear Athena, Iolaus, and Hermes followed by a ram. The decoration was intended as a single scene and is a good example of dramatic composition. The vase probably dates from the end of the black-

figured period.

A Collection of Ancient Glass.—In *Mus. J. X*, 1919, pp. 156-165 (11 figs.), Miss E. F. R(AMBO) describes a collection of 180 pieces of ancient glass acquired by the University Museum in 1916. They date from the fifth century B.C. to the fourth century A.D., but most of them were made in the century before or after the Christian era. The most interesting piece is a large, iridescent covered jar of turquoise blue.

PROVIDENCE.—Pompeian Wall-Painting.—A fragment of a Pompeian wall-painting recently acquired by the Rhode Island School of Design is published by H. S. HINCKS in its *Bulletin*, VII, 1919, pp. 28-31 (fig.). The subject is a woman holding a lyre, apparently an allegorical representation of the muse of music. The work belongs to the third and best period of Pompeian wall-painting.

EARLY CHRISTIAN, BYZANTINE, MEDIAEVAL, AND RENAISSANCE ART

EGYPT

CAIRO.—Tulunide Ornament.—In *Burl. Mag.* XXXV, 1919, pp. 180-188 (3 pls.; fig.), K. A. C. CRESWELL publishes reproductions of stucco ornaments on the soffits of arches which were recently cleared of their layers of coarse plaster in the mosque of Ahmed Ibn Tûlûn, Cairo. Historical data indicate

that the decorations of the mosque were influenced by the slightly earlier ornament at Sâmarrâ, and the analysis of the pieces here published is withheld until the large quantity of examples of stucco ornament from Sâmarrâ now on their way to the British Museum can be studied.

ITALY

AREZZO.—An Example of Ceramics by Andrea Sansovino.—Vasari tells of a terracotta copy by Andrea Contucci, called Sansovino, of an antique medal portrait of Galba. Milanesi, followed by other commentators on the *Vite*, says that this terracotta is lost. In *Boll. Arte*, XIII, 1919, pp. 30–32 (pl.), A. DEL VITA publishes a majolica plaque in the Arezzo museum which he identifies as Sansovino's head of Galba. It is a strong, forceful piece of modelling. But the principal interest that attaches to the identification concerns the problem of the collaboration of sculptors and workers in ceramics at this time. Vasari says that a splendid terracotta representing the Assumption, made by Sansovino for the church of S. Agata in his native town, was glazed by "della Robbia." But that cannot be the case with the Galba portrait, for the varnish, colors, and technique are unlike those used in the della Robbia shop. A small amount of a peculiar and beautiful red color that is used on a clasp on Galba's mantle leads to the identification of a Tuscan ceramic atelier, that of Cafaggiolo, as the one in which Sansovino's terracotta plaque received its majolica glaze.

ASSISI.—Andrea da Assisi.—In *Rass. d'Arte*, XIX, 1919, pp. 33–36, U. GNOLI publishes documents relating to Andrea da Assisi, called the "Ingenious." These notices prove that Vasari was not so incorrect as has been supposed in his account of that artist, who was one of the best pupils of Perugino. But no help is given in the matter of attributing definite work to the "Ingenious" painter.

BOLOGNA.—Alessandro Menganti.—In *Boll. Arte*, XIII, 1919, pp. 107–108, C. RICCI calls attention to a Bolognese sculptor of the middle of the sixteenth century, Alessandro Menganti, who is overlooked by historians of art, e.g. he does not even appear in Cicognara's *Storia della Scultura*. This is due to no lack of extant works or of documentary evidence for still others, nor yet to the quality of the sculptor's work, the excellence of which is vouched for by the statue of Gregory XIII in Bologna. A dated portrait of the artist by Passarotti in the Perugia gallery puts the date of his birth in 1531.

FLORENCE.—Intarsia by Alberti.—In *L'Arte*, XXII, 1919, pp. 34–36 (4 figs.), A. VENTURI publishes some examples of inlaid marble by Alberti in San Sepolcro. They are of such a type as he describes in *De re aedificatoria*. Among them are the Rucellai and Medici stemmi. These exquisitely designed kaleidoscopic forms are among the most complete expressions of the dreams of the humanist architect.

LUCCA.—A Madonna by Luca della Robbia.—In *Burl. Mag.* XXXV, 1919, pp. 49–55 (2 pls.), G. DE NICOLA publishes a recently discovered Madonna by Luca della Robbia. It is in the church of San Michele at Lucca, and, in spite of some bad restorations, its authenticity is clearly proved by comparison with well-known works by Luca. It may be dated about 1440. Mention is here made also of an Annunciation in the little church of San Niccolò, Florence, which is one of the best works of Andrea della Robbia and has hitherto



FIGURE 4.—SCENES FROM THE LIFE OF ST. JOHN THE BAPTIST BY HENRI MET DE BLES: MESSINA.

remained altogether unknown. Permission has not yet been obtained to reproduce this important terracotta relief.

MESSINA.—*New Documents.*—In *Rass. d'Arte*, XIX, 1919, pp. 75–80 (fig.), E. MAUCERI publishes nine documents which throw new light on the fifteenth century sculpture and painting of Messina. Some of the records concern Antonello and other known artists; some give us names that are new in the history of the art of Messina. Besides the documents, a marble tombstone (in the Museo Nazionale, Messina) of a young sculptor of Barcelona, Jains Sisa, is published here for the first time. It is of interest as offering a new confirmation of the penetration of Catalan art into that of Sicily.

Unpublished Paintings.—In *Boll. Arte*, XIII, 1919, pp. 77–79 (20 figs.), E. MAUCERI describes a number of unpublished paintings of the fourteenth and fifteenth centuries now in the Museo Nazionale of Messina. Some of these have only recently been cleaned so that they can really be seen. A Pietà has been classified under the name of Roger van der Weyden, and though this attribution is too ambitious, the work shows that master's inspiration. A follower of Memling is responsible for a triptych of the Madonna and Saints. Another Flemish triptych of the sixteenth century represents the Crucifixion and Christ under the Cross and the Resurrection. But the gem of the Flemish group is the panel attributed to Henri Met de Bles, representing St. John the Baptist and scenes from his life (Fig. 4). A number of paintings belong to the circle about Antonello: a holy bishop, an altar pala with the Madonna, and the great polyptych formerly in the church of S. Niccolò in Castoreale. The badly damaged central part of a triptych representing the Holy Family recalls the Ferrarese manner. And, finally, the panel of the Rosary of the Virgin, with the fifteen mysteries and the figure of King David, belongs to the first part of the seventeenth century.

MORRA.—*Luca Signorelli.*—In *L'Arte*, XXII, 1919, pp. 9–12 (4 figs.), A. VENTURI publishes four frescoes at Morra, which, though in a very bad and neglected condition, bespeak the greatness of the art of Signorelli. They are: the Last Supper and Christ on the Mount of Olives (two compositions in one compartment of the wall where a door has been cut through, mutilating both paintings), the Virgin of the Misericordia, and the Redeemer.

RAVENNA.—*The Aquarium of the Archbishop's Palace.*—The building recently uncovered at Ravenna during the restoration of the Archbishop's palace, and which is attracting so much attention from students of Ravenna, is identified by C. RICCI in *Boll. Arte*, XIII, 1919, pp. 33–36 (pl.; 2 figs.) as an aquarium. The building is constructed of brick. At its base are a series of arches with niches between and in the springing of the arches. Above this, in the semblance of a cornice, is a row of small rectangular openings that give access to a tunnel extending the full length of the building. Above the cornice is an arcade, not giving access to a room or corridor, but forming isolated niches. A second "cornice" of small apertures surmounts this arcade. The explanation of the construction seems to be as follows: In the niches in the arches below were large reservoirs for fish, tortoises, etc. The "cornice" openings were for nests of free birds of the air, pigeons, sparrows, and the like, and the upper arcade niches, when covered with a netting, served as cages for rare birds. Certain proof of this identification of the building is given by Agnellus in his *Liber Pontificalis*, where, in his life of Giovanni VIII, he mentions the

location of the *vivarium*; this location corresponds exactly with that of the present building. The date also can be approximated. It must be later than that of the Oratorio of S. Andrea (built between 494 and 519) against which it is built, and earlier than Giovanni VIII (archbishop of Ravenna from 777 to 784) in whose *Life* it is mentioned. It seems probable that it was built by Felix, archbishop of Ravenna from 707 to 723, who, returning from Constantinople, built a house called the house of Felix. The style accords with such a date.

ROME.—Correggio.—The old tradition of the complete independence of Correggio is shattered by O. HAGEN in *Z. Bild. K.* XXVIII, 1916-17, pp. 110-120 (12 figs.). In spite of the literary evidence—beginning with Vasari—that Correggio did not visit Rome, sufficient proofs are here set forth to make such a visit certain and thus account for the sharp change in style that appears between the first certain work of Correggio, the Dresden Madonna with St. Francis (1514-15), and his next absolutely indubitable production, the frescoes of the Camera of St. Paul in Parma. It has been contended that he does not show enough antique influence to have visited Rome. The Luna-Diana, the so-called Adonis, the Satyr, and other figures in the Camera of St. Paul refute this argument. Aside from their general classical character, their possible prototypes can be found in definite antique examples. But still more convincing as proof of the Roman visit is the very close parallel—amounting almost to copying—between many of Correggio's figures in the Camera of St. Paul and figures in the Vatican Loggia.

Piero della Francesca.—Again Vasari is confirmed in a passage that has long been doubted by critics. G. ZIPPEL in *Rass. d'Arte*, XIX, 1919, pp. 81-94 (7 figs.) brings together documents, tradition, and stylistic analysis which prove that Vasari was correct in assigning to Pietro dal Borgo San Sepolero a considerable activity in Rome. In the perspective decoration in the "Greek" room of the old Vatican library, where rich marble columns, elaborate architraves, and other architectural forms are painted with extraordinarily illusionistic effect, we are to recognize the earliest work of Piero in Rome. The date of the document which connects Piero with the painting in a room for the pope—apparently this room—is 1459; so with this we are given a new date in the life and artistic career of the artist. Another important work, which, like that in the "Greek" room, has been assigned to Melozzo da Forlì, can be quite definitely assigned to Piero in its principal execution. It is the famous painting of Sixtus IV giving audience to Platina, now in the Vatican gallery, but formerly decorating a wall of the "Latin" room. The painting was begun by Piero in 1475, but in the following year, because of the loss of his eyesight, he had to turn over the completion of the work to his pupil, Melozzo. It appears from the name by which Piero is referred to in the Roman documents, Pietro di Benedetto dal Borgo, that he is the brother of Francesco di Benedetto dal Borgo, who figures very conspicuously in the documents as architect at the court of the pope. This may account for some of Piero's commissions there.

SASSOFERRATO.—Paolo Agabiti.—In *Boll. Arte*, XIII, 1919, pp. 91-94 (4 pls.), A. COLASANTI ascribes four previously unidentified paintings to Paolo Agabiti from Sassoferrato, who is already known by dated works. The earliest of these is the Madonna between Sts. Francis and Dominic in the church of S. Colombano in Bologna, there attributed to the fifteenth century Bolognese school. The Pietà belonging to Signora Mongiardini Rembadi may be placed

among the artist's works dating about 1511. The Madonna enthroned between Saints, a fresco recently uncovered in the church of S. Esuperanzio in Cingoli (Fig. 5), which has been ascribed by the Venturis to Antonio Solario, is, upon close examination, to be placed among Agabiti's works. The Entombment in the Office of the Register in Gubbio appears to belong to the last period of the artist's activity about 1531.

URBINO.—A *Stauroteca*.—A *stauroteca*, or reliquary of the cross, which was deposited a few years ago in the National Gallery of the Marches at

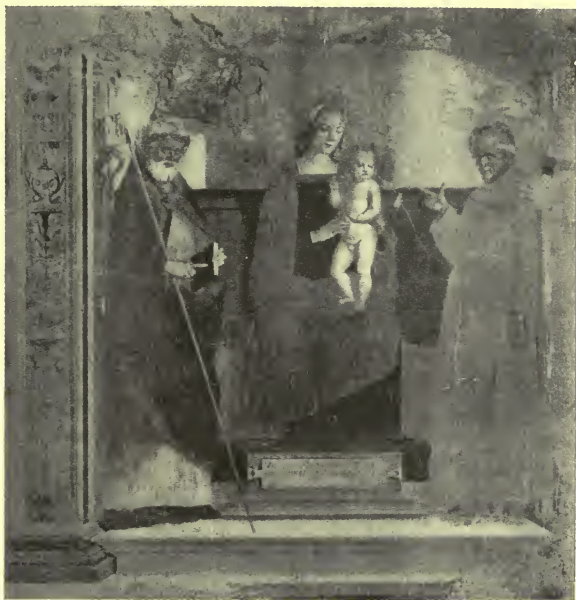


FIGURE 5.—MADONNA AND SAINTS BY AGABITI: CINGOLI.

Urbino is published by L. SERRA in *Burl. Mag.* XXXV, 1919, pp. 105-110 (pl.). The richly adorned figures of Constantine and Helena form the chief interest of its decoration. Though it offers no new iconographical features, it shows a careful restatement of previously employed forms, and in its gorgeous but refined magnificence it finds no equal, perhaps, in any similar work in metal. The advanced character of the decorative treatment would indicate as the probable period of its execution the end of the twelfth or the beginning of the thirteenth century.

PORTUGAL

LISBON.—A New Dürer.—In *Z. Bild. K.* XXVIII, 1916-17, pp. 131-132 (pl.), M. J. FRIEDLÄNDER publishes a hitherto unknown painting of the Holy Family by Dürer which shortly before the war appeared in Lisbon and now belongs to Dr. Paul von Schwabach of Berlin. The painting is signed, in the

manner of Dürer's great altar works, with the monogram and beneath that: ALBERTVS DVRER | NOREMBERGENSIS | FACIEBAT POST | VIRGINIS PARTVM | 1509.

FRANCE

PARIS.—A New French Primitive.—In *Gaz. B.-A.* XV, 1919, pp. 233-244 (pl.; 2 figs.), G. BRIÈRE writes on a little tondo of the Pietà, a French primitive recently presented to the Louvre by M. Maurice Fenaille. This exquisite example shows some relationship to the larger tondo in the Louvre representing an Adoration of the Trinity by the Virgin and Angels, to the Entombment, also in the Louvre, and to a tondo representing the Coronation of the Virgin in the museum of Berlin. But manuscripts offer still better parallels—the more satisfactory because manuscripts are more often dated or dateable and can be more definitely attributed as regards nationality and even personal identity of authorship. The miniatures executed by Jacquemart de Hesdin offer many points for comparison with the tondo of the Pietà and give the best reasons for affirming the French origin of the latter. It is, then, to the period of great artistic activity that came during the reign of Charles VI, and more definitely to the years between 1390 and 1410, that the new acquisition seems to belong; and it comes, apparently, from an atelier of the Ile-de-France.

SWITZERLAND

BERNE.—A Self-Portrait of Roger van der Weyden.—In 1913 (*Rep. f. K.* XXXVI, pp. 297 ff.) H. Brandt published a study under the title of 'Kunsthistorisches bei einem Mystiker des 15. Jahrs.' *Ibid.* XXXIX, 1916, pp. 15-30 (3 figs.), H. KAUFFMANN makes known the author and title of the treatise there discussed by Brandt and makes a correction in the interpretation of the Latin text which leads to the identification of a self-portrait of van der Weyden in the Trajan tapestry at Berne. The fifteenth century "Mystiker" is Cardinal Nicolaus of Cues (1401-64) and the place cited by Brandt is in his *De visione dei sive de icona liber*. In this, when correctly read, we learn that at the time of his visit to Brussels in 1451, the cardinal saw a portrait of Roger in a splendid painting in the town hall. The portrait is described as looking out from the picture with eyes that follow the spectator. The most probable conclusion is that the reference is to the much praised picture of Justice painted by Roger himself (it was in the town hall until the destruction of the latter in 1695) and that in this picture Roger included a portrait of himself. Fortunately, we have a very faithful copy of this painting made ten years after its completion, *i.e.*, at just about the time the cardinal saw the original. This copy is the Trajan tapestry at Berne, and in it there is a head answering the cardinal's description. Moreover, this head stands out from the rest of the picture in every way: the coloring is altogether different from that of the other faces, the movement and pose is contrary to the rest, and while the other faces are passive expressions of one type, this one is full of vivacity and is almost a caricature in the very individual rendering of features. Further, its location in the composition and the direction of the gaze are thoroughly characteristic of self-portraits that appear in similar compositions of the fifteenth century. It is the earliest portrait of Roger that we have and the only one for which there is contemporary testimony.

GERMANY

AUGSBURG.—**Wilhelm van den Broeck.**—Some alabaster reliefs in the Maximilian Museum in Augsburg afford the basis for a study of the sculptor, Wilhelm van den Broeck by T. MUCHALL-VIEBROOK in *Mh. f. Kunstw.* XII, 1919, pp. 57–65 (7 figs.). Hitherto that master has been merely a name; none of his works have been thought to be extant. Two of the reliefs in Augsburg, representing the Crucifixion, are signed and dated. The dates are 1560 and 1562, and the signature, “Guilielmus Paludanus,” is the Latinized rendering of Wilhelm van den Broeck—other members of the family are familiar in literature. From documents we learn of the alabaster decoration of an altar for the Dominican church in Augsburg, consisting of reliefs of the Last Supper, the Crucifixion, and the Ascension, with parallel scenes from the Old Testament. Reliefs answering all these descriptions are in the Maximilian Museum, attributed to various masters; but their stylistic qualities mark them without doubt as the work of one master, the master of the signed Crucifixions. A further confirmation of their provenance (from the altar of the Dominican church in Augsburg) is given by two coats of arms on the 1560 Crucifixion. These are the arms of prominent Augsburg families. In Wilhelm van den Broeck’s artistic qualities, which can be very satisfactorily studied in these examples, Italianized and pictorial features predominate.

DANZIG.—**Master Francke.**—Paintings in Danzig published by H. EHRENBURG in *Mh. f. Kunstw.* X, 1917, pp. 26–31 (3 pls.) aid in the characterization of the Hamburg painter, Master Francke. Scenes from the life of St. Dorothea on an altar-piece from the Danzig church of Mary, and now in the city art museum, are, though somewhat inferior in quality, too closely related to the Hamburg Thomas-altar and the Nykyrko-altar now in the museum of Helsingfors, both by Master Francke, to have been merely influenced by him. They seem rather to be his own work and earlier than either of the altar-pieces just referred to. There are other altar panels in this church which, if not by Master Francke himself, are at least so close to him in style that they are useful in making his manner more clear. They are a representation of the Trinity, which is very similar in arrangement to the Leipzig and Hamburg compositions of the Man of Sorrows, and the Ecce Homo and Entombment. The architecture in the Ecce Homo panel is strongly Italianized; the inspiration probably came by way of Prague.

DARMSTADT.—**The Marriage-Bed on the Alexander Casket.**—In *Mh. f. Kunstw.* XII, 1919, pp. 66–67 (fig.), S. POGLAYEN-NEUWALL discusses the puzzling nuptial scene on the syncretic casket with scenes from the Romance of Alexander at Darmstadt. This scene has been connected with such prototypes as the marriage of Zeus and Hera on the Selinus metope and Hercules with a Nymph on various ancient gems, etc. But in all these instances the bed is lacking. The real prototype is rather to be sought in vase painting where banquet scenes take a form analogous to that of the Darmstadt casket. Poseidon and Amphitrite on a cylix from Vulci in the British Museum offer an exact parallel.

DRESDEN.—**The Cavazzola Picture.**—In *Mh. f. Kunstw.* IX, 1916, pp. 62–63 (pl.), J. KOHLER identifies the subject of the incomparable portrait by Cavazzola in the Dresden gallery. It is Giovanni Megli painted at about the age of 44 shortly before the artist died in 1522. The importance of Giovanni

Megli in contemporary history proves the fitness of the interpretation which Cavazzola has perpetuated. The portrait unites the realism of a Velasquez with the metaphysical penetration of a Piombo.

LUBECK.—**Hans Kemmer.**—A pupil of Cranach's school is clearly characterized in *Mh. f. Kunstw.* X, 1917, pp. 1-7 (4 pls.) by K. SCHAEFER, who attributes a number of paintings with a high degree of certainty to Hans Kemmer of Lubeck. The paintings of the St. Olaf diptych in the church of St. Mary at Lubeck were attributed to Grünewald, Lucas Cranach, and Hans Cranach until in 1901 the contract from the Lubeck archives was published, giving in detail the agreement between the *Kaufmannskompagnie der Bergenfahrer* at Lubeck and the painter Johann Kemmer. This document places the date of the work in 1522. The fact that a number of paintings so close in style to this work as to warrant the assumption that they are by the same artist are signed with the monogram H. K. makes their ascription to Johann or Hans Kemmer practically certain. The first of these, representing Christ and the adulteress, in a private collection in Lubeck, is dated 1530. A closer parallel could hardly be found than that between the woman here and a female figure in the Descent from the Cross on the St. Olaf altar. The monogram and the belief that this was a Leipzig production led Friedländer to attribute the work to Hans Krell, but the coats of arms prove that it was commissioned by a Lubeck family. A second work with Hans Kemmer's monogram has the date 1534. It is a small half-length portrait of a woman in the Leipzig museum and has also been attributed by Friedländer and by Bode to Hans Krell. In the provincial museum at Hanover is a *Salvator Mundi* with a pair of donors; the woman here is in feature and especially in costume a sister of the one represented in the preceding portrait. It was painted three years later. A portrait of a man in the hands of a dealer in Berlin was painted in the same year as was the portrait of a woman. The fifth signed work is a so-called marriage plate with a painting of the Trinity, in the Schwerin museum. The date is 1540, and the coats of arms show that we are again dealing with a work of Lubeck. Another less important and much restored work with the artist's monogram represents Christ and a donor and is in the museum for art and cultural history in Lubeck. Its principal interest is that it proves that the artist was still working in Lubeck as late as 1544. Hans Kemmer must have been born about 1495—his birthplace is not known. About 1515 he began studying under Cranach and by 1522 was at work in Lubeck.

WEIMER.—**A New Self-Portrait of Dürer.**—In *Rep. f. K.* XXXIX, 1916, pp. 10-15 (5 figs.), F. ROH identifies a drawing in the Weimar museum as a self-portrait of Dürer. It is a careful representation of the nude figure shown to the knees. The example is of special importance because, unlike his self-portraits in Madrid, Munich, and Prague (the last is in the Rosary picture), where the artist shows himself with long curling locks hiding all but the front of his face, the hair is here bound up in a net and the shape of the skull is clearly drawn. The fact that the figure is not intended for any historical or ideal composition is another reason for our having a more realistic presentation here than in the others. The foreign characteristics of the head recall Dürer's own account of his Hungarian paternal descent. The age of the subject and the style of the drawing date the work about 1499.

HUNGARY

BUDAPEST.—**Leonardo's Equestrian Studies.**—In an extensive investigation of Leonardo's development of the problem of representing a man on horseback S. MELLER (*Jb. Preuss. Kunsts.* XXXVII, 1916, pp. 213-250; 2 pls.; 15 figs.) distinguishes between the drawings which served as studies for the equestrian statue of Sforza and those for the Trivulzio monument. The most interesting result of the research is the demonstration that there are extant both models and copies of models made by Leonardo for these monuments. The four different compositions of horse and rider in the Milanese engraving have been considered copies of Leonardo's drawings, but that they are copies of models is shown by the rectangular pedestals on which the groups are placed and by the fact that in each case there is a support under one of the upraised forefeet of the horse. In two of the groups a vanquished warrior serves that purpose; but in the other two a tree stump is used. An almost exact parallel for the vanquished warrior in one of these compositions is found in a little bronze figure in the collection of Prince Trivulzio, Milan. Whether this is a model from Leonardo's own hand or a copy after such a one cannot be said; that it is not a copy of the engraving is clear from the Leonardesque face, which cannot be seen in the engraving. All these models, represented by the engravings and the bronze figure, are of studies for the Sforza monument. Copies of other variations of the group are to be seen in a silver-point drawing in Windsor and in a pen drawing in the Royal Graphic Collection in Munich. Both of these are clearly reproductions of small models made by Leonardo for the Sforza monument. Leonardo has left few drawings for the Trivulzio monument, but this scarcity is compensated for by a wonderful little bronze model for the group lately acquired by the Budapest museum. This equestrian study is undoubtedly the work of Leonardo (whether he was responsible for the actual casting of the bronze is an indifferent matter) and shows the farthest stage in the development of his investigation—continued through a quarter of a century—of the problem of the plastic representation of horse and rider.

POLAND

CRACOW.—**The Czartoryski Raphael.**—The much-disputed portrait in the Czartoryski collection at Cracow, which has been assigned now to Timoteo Viti, now to Sebastiano del Piombo, now to Guercino, and occasionally to Raphael is given a new interpretation by O. FISCHER in *Jb. Preuss. Kunsts.* XXXVII, 1916, pp. 251-261 (pl.; 17 figs.). The subject has been as much disputed as the authorship. Attempts have been made to show that it represents this or that youth of royal blood, and it has had a wide acceptance as a portrait of Raphael. But it is now shown that the subject is not a young man at all but a woman! Aside from the fact that the face, hands, and rounded body are those of a woman, the costume is not unusual for a female figure, and the long hair was not worn by men at all in the period to which the portrait belongs. Comparison with the types of women represented by Raphael and his atelier indicates that the beautiful Czartoryski portrait finds its place among those that apparently had as their model the baker's daughter of Trastevere, whom we know as La Fornarina. The work is that of Raphael himself.

SWEDEN

STOCKHOLM.—Lambert Rycx.—In *Burl. Mag.* XXXV, 1919, pp. 56–61 (pl.), T. BORENIUS publishes a Virgin and Child owned by M. C. Frisk of Stockholm, which adds to the small amount of information regarding Flemish painters in the art life of Sweden in the sixteenth century. The painting is signed by Lambert Rycx Aertsz or Aertssoon of Antwerp, who spent some years in Sweden, and who has until now been a mere name in art history.

GREAT BRITAIN

LONDON.—A Dürer Drawing.—A little known drawing by Dürer, portraying Christ as the Man of Sorrows, which has just been acquired by the British Museum is published by C. DODGSON in *Burl. Mag.* XXXV, 1919, pp. 61–62 (pl.). It is in India ink, and the character of the half destroyed monogram, as well as the appearance of the drawing itself, dates the work about 1501.

A Mosaic Panel.—In *Burl. Mag.* XXXV, 1919, p. 75 (pl.) there is published an ancient mosaic panel recently presented to the National Gallery. The subject is a summary of the apsidal decoration of the Upper Church of S. Clemente at Rome.


Bono da Ferrara.—Two panels in the collection of Mr. Henry Harris, representing St. John the Baptist and St. Prosdochimus, are added by T. BORENIUS in *Burl. Mag.* XXXV, 1919, p. 179 (pl.) to the meagre list of Paduan quattrocento paintings that have come down to us. Stylistic characteristics further mark the panels as the work of a definite follower of Squarcione, Bono da Ferrara. Two of his authenticated works, besides others reasonably attributed to him, are extant.

A Greek Icon.—An icon illustrating a Greek hymn, owned by Mr. N. Giannacopulo, is published by G. EUMORFOPOULOS in *Burl. Mag.* XXXV, 1919, pp. 102–105 (pl.). The type is that which has the Virgin and Child on a large scale in the middle. It is a work of the sixteenth century and is signed by John Baryboze the Chiote.


A Silver Reliquary Head.—In *Burl. Mag.* XXXV, 1919, p. 129 (2 pls.), M. CONWAY publishes a silver reliquary head lately acquired by Mr. Henry Harris. It is a rare monument, apparently Italian of the twelfth century.

The Costessey Collection of Glass.—In *Burl. Mag.* XXXV, 1919, pp. 26–31 (2 pls.) A. VALLANCE publishes some of the pieces of a collection of glass recently acquired by Mr. Grosvenor Thomas. The most interesting portion of the collection consists of a set of panels from a Jesse window, probably French, of about 1220 to 1240, too early for the motive to have been fully developed. A panel of the fifteenth century representing the Madonna is a superb example of French work. Other important pieces are a Dutch or Flemish Judgment of Solomon and Battle of Rephidim, a German series of scenes from the Passion of Our Lord, and two English armorial shields.

UNITED STATES

BOSTON.—Flemish Engravings.—Two engravings by Master  recently acquired by the Museum of Fine Arts are published by F. C. in *B. Mus. F. A.* XVII, 1919, pp. 50–52 (2 figs.). They represent St. Bartholomew and St. John. Special interest attaches to this master because of his

relationship to Master E. S. and to Israhel van Meckenem. He served his apprenticeship under the former, and the latter, in turn, worked in his shop.

Brussels Tapestries.—In *B. Mus. F. A.* XVII, 1919, pp. 52–53 (2 figs.), S. G. F. T. describes two Brussels tapestries which had long been lent to the Museum and have now been acquired permanently. They were made about the middle of the sixteenth century by a master-weaver who signs himself . They represent the Battle of Ticinus and Scipio upbraiding Massinissa.

CHICAGO.—**Foliated Initials by Don Simone of Siena.**—In *Art in America*, VIII, 1919, pp. 21–27 (pl.) E. H. WILKINS describes the decorated initials of a beautiful manuscript of the *Genealogia deorum* of Boccaccio recently presented to the University of Chicago. The manuscript dates about 1380–1404 and was made for a friend of the author. It is probable that it is the portrait of Boccaccio himself that appears in one of the initials. Similarity to manuscripts known to be the work of Don Simone da Siena, and to others done under his direction or influence, clearly establishes the authorship of the Chicago manuscript.

CLEVELAND.—**Gothic Glass and Sculpture.**—Among the objects of Gothic art recently exhibited in the Cleveland Museum of Art were windows lately purchased by the Museum and a sculptured group of St. John blessing a kneeling knight lent by Messrs. Parish-Watson and Co. This group is clearly Burgundian in provenance and from an atelier still working in the manner of Claus Sluter. The knight's armor dates it about 1450–1460. Two of the windows are from the early thirteenth century and may from their style be judged as derived from the same workshop as the windows in the cathedral of Le Mans—both influenced by Chartres. The third window is a little later, dating about 1250. (W. M. M., *B. Cleve. Mus.* VI, 1919, pp. 67–70; 4 figs.)

DETROIT.—**Bartolomeo Ramenghi.**—In the *Bulletin of the Detroit Museum*, XIII, 1919, pp. 58–59 (fig.), C. H. B. publishes a Madonna Enthroned between Saints by Bartolomeo Ramenghi, called Bagnacavallo, owned by the museum and but recently put on exhibition. The painting is signed and dated 1529.

NEW YORK.—**Breydenbach's Itinerary.**—A perfect copy of the first edition of Breydenbach's *Itinerary of a Voyage by Sea to the Holy Sepulchre*, dated at Mayence, 1486 (o. s.) and printed by Erhard Reuwich, has recently been acquired by the Metropolitan Museum. Aside from the text, which is extremely interesting, there are large views of Venice, Rhodes, Jerusalem, etc. But from a purely artistic point of view the most important and interesting cuts in the book are the frontispiece and the printer's mark. (W. M. I., Jr., *B. Metr. Mus.* XIV, 1919, pp. 215–221; 3 figs.)

A Statue of the School of Troyes.—A limestone polychrome statue of a pilgrim saint, probably St. Savina, of the school of Troyes is published by J. BRECK in *Art in America*, VIII, 1919, pp. 3–6 (pl.). The statue is in the Metropolitan Museum and apparently is assignable to the second decade of the sixteenth century, when, in the revival of sculpture at Troyes, the Gothic tradition still prevailed against Italianism.

A Twelfth Century Bronze.—A bronze base of an altar cross or reliquary of the twelfth century, which is among the recent accessions of the Metropolitan Museum, is published by G. E. P., Jr., in *B. Metr. Mus.* XIV, 1919, pp. 222–

225 (fig.). Its principal characteristics relate it to the work of Godefroid de Claire and warrant its attribution to his school.

Early Christian Ivories.—Two fragments of ivory in the Morgan collection of the Metropolitan Museum carved with the same composition, the *Ascension*, are discussed by J. B. in *B. Metr. Mus.* XIV, 1919, pp. 242–244 (fig.). The iconography is Palestinian (cf. E. T. Dewald, *A. J. A.* XIX, 1915, pp. 277 ff.) and the execution so closely related to Coptic work that it is reasonable to suppose that the ivories were carved in Palestine by Coptic craftsmen in the late sixth or early seventh century.

Holbein's Dance of Death.—A complete set of proofs of the woodcuts of Holbein's Dance of Death, which has recently become the property of the Metropolitan Museum is discussed by W. M. I., Jr., in *B. Metr. Mus.* XIV, 1919, pp. 231–235 (4 figs.). The set comes from an English private collection and is made up of examples from various editions.

Gilded and Engraved Armor.—In *B. Metr. Mus.* XIV, 1919, pp. 210–215 (4 figs.), B. DEAN publishes a suit of armor for man and horse which has recently been acquired for the museum. It is almost complete, in every detail and beautifully preserved. The date 1527 occurs three times in the ornamentation and the work appears to be French. There is good evidence for the belief that the armor was made originally for the Sieur Jacques Gourdon de Genouilhac (1466–1546), who was a distinguished courtier and warrior at the court of Louis XII and Francis I. The armor has up to the present been preserved in his family and assigned to him.

A Crucifixion by Pesellino.—The principal interest in the small Crucifixion attributed to Pesellino, which was recently bought by the Metropolitan Museum, lies in the landscape background. The part of the landscape in which the figures are immediately placed follows the old formal tradition, but beyond this is seen real landscape, treated in quite modern manner. The influence of Fra Angelico is evident in this innovation. (B. B., *B. Metr. Mus.* XIV, 1919, pp. 155–156; pl.)

Drawings from the Pembroke Collection.—The drawings among the late acquisitions of the Metropolitan Museum to which attention is called by B. B. in *B. Metr. Mus.* XIV, 1919, pp. 136–140 (4 figs.) come principally from the sale of the Pembroke collection in 1917. The earliest of these, probably done by a Siennese in the middle of the fourteenth century, is a copy of Giotto's mosaic known as *La Navicella* made for old St. Peter's in Rome. A drawing of a horse with anatomical measurements is now ascribed to Antonio Pollajuolo or his school. The profile of a woman, considered by Berenson as one of Leonardo's studies for the Virgin and St. Anne, and three drawings by Correggio are also from the Pembroke collection. A sketch of St. Catherine by Dürer comes from the Poynter collection.

ST. LOUIS.—**Italian Renaissance Cassoni.**—Two carved walnut cassoni that have recently been acquired by the St. Louis City Art Museum are published in its *Bulletin*, IV, 1919, pp. 2–5 (2 figs.). The more important one is of the late Renaissance period and of Roman provenance, as is indicated by the influence of classical discoveries of that time in the shape of the chest and in the technique and subject matter—the latter is from classical mythology. The chest takes the form of a sarcophagus. The other cassone is Venetian, also of the sixteenth century, but still retaining the rectangular form of the earlier period.

French Renaissance Wood-carving.—An interesting French carved wooden door which may probably be dated in the reign of Francis I has been obtained by the St. Louis City Art Museum. The work shows the blending of the Gothic and the Renaissance at just the period when the French craftsmen, under the influence of skilled workers from Italy, were rapidly forsaking the Gothic style for that of the Renaissance. The portrait-like heads on the door suggest that Ghiberti's gates of the Baptistry at Florence were not unknown to the carvers of this specimen (*Bulletin of the St. Louis City Art Museum*, IV, 1919, pp. 5-7; fig.). A French credence, formerly in the collection of M. Chabrières Arlès of Lyons, and now in the museum, belongs to about the same period as the door just referred to and shows the early manifestations of the inventive fancy of French wood-carvers, which was to come to rich fruition in succeeding centuries (*Ibid.* pp. 8-9; fig.). An important cabinet of the style of Jacques Androuët (ca. 1510-1580), called Du Cerceau, was formerly in the collection of Mr. T. Foster Shattock and on loan at the South Kensington Museum (*Ibid.* pp. 9-10; fig.). Finally, a carved walnut chair in the museum is of the period of Henry II and seems to have been closely associated with him, for the monogram which appears on it is probably that of the king and his mistress, Diane de Poitiers (*Ibid.* pp. 10-12; fig.).

AMERICAN ARCHAEOLOGY

GENERAL AND MISCELLANEOUS

NEW MEXICO.—Excavations on the Animas River.—In *Anthropological Papers* of the American Museum of Natural History (XXVI, pt. 1, New York, 1919), EARL H. MORRIS describes his excavations in the Aztec ruin on the Animas River, in San Juan County, New Mexico, during which excavations sixty-nine secular chambers and eight circular kivas were uncovered. A full account of the different finds is given. The writer says that architecturally the ruin is to be classed with Pueblo Bonito. The pottery resembles closely that prevailing at Mesa Verde, and indicates two periods of occupation.

NEW YORK.—Rock Stations.—In *Am. Anth.* XXI, 1919, pp. 139-152, MAX SCHRABISH describes his explorations in 129 rock stations in New York and New Jersey which show evidence of human occupation. Many of these were found along the streams and trade routes but more occur in the mountains. The sites contain animal bones, artifacts, and pottery fragments with typical Algonquin decorations. The writer discusses several geological features which determined which rock stations might be desirable for human habitation.

OHIO.—The Ulrich Group of Mounds.—In the *Ohio Archaeological and Historical Quarterly*, 1919, pp. 162-175 (6 figs.), T. B. MILLS describes the Ulrich group of mounds in Montgomery County. He examined four mounds. These contained a large number of flint implements, marine shell beads, copper objects, etc.

ABBREVIATIONS

Abh.: Abhandlungen. *Allg. Ztg.*: Münchener Allgemeine Zeitung. *Alt. Or.*: Der alte Orient. *Am. Anthr.*: American Anthropologist. *Am. Archit.*: American Architect. *A.J.A.*: American Journal of Archaeology. *A.J. Num.*: American Journal of Numismatics. *A.J. Sem. Lang.*: American Journal of Semitic Languages and Literature. *Ami d. Mon.*: Ami des Monuments. *Ant. Denk.*: Antike Denkmäler. *Ann. Arch. Anth.*: Annals of Archaeology and Anthropology. *Ann. Scuol. It. At.*: Annuario della r. Scuola Archeologica di Atene e delle Missioni Italiane in Oriente. *Arch. Anz.*: Archäologischer Anzeiger. *Ἀρχ. Δελτ.*: Ἀρχαιολογικὸν Δελτικόν. *Ἀρχ. Ἐφ.*: Ἀρχαιολογικὴ Ἐφημερίς. *Arch. Rec.*: Architectural Record. *Arch. Rel.*: Archiv für Religionswissenschaft. *Arch. Miss.*: Archives de Missions Scientifiques et Littéraires. *Arch. Stor. Art.*: Archivio Storico dell' Arte. *Athen.*: Athenaeum (of London). *Ath. Mitt.*: Mitteilungen d. k. d. Archaeol. Instituts, Athen. Abt.

Beitr. Assy.: Beiträge zur Assyriologie. *Ber. Kunsts.*: Amtliche Berichte aus den Königlichen Kunstsammlungen. *Berl. Akad.*: Preussische Akademie der Wissenschaften zu Berlin. *Berl. Phil. W.*: Berliner Philologische Wochenschrift. *Bibl. Stud.*: Biblische Studien. *Bibl. World.*: The Biblical World. *B. Ac. Hist.*: Boletín de la real Academia de la Historia. *B. Soc. Esp.*: Boletín de la Sociedad Española de Excursiones. *Boll. Arte.*: Bollettino d'Arte. *Boll. Num.*: Bollettino Italiano di Numismatica. *Bonn. Jb.*: Bonner Jahrbücher: Jahrbücher des Vereins von Altertumsfreunden im Rheinlande. *B.S.A.*: Annual of the British School at Athens. *B.S.R.*: Papers of the British School at Rome. *B. Arch. C. T.*: Bulletin Archéologique du Comité des Travaux hist. et scient. *B. Arch. M.*: Bulletin Archéol. du Ministère. *B.C.H.*: Bulletin de Correspondance Hellénique. *B. Cleve. Mus.*: Bulletin of the Cleveland Museum of Art. *B. Inst. Ég.*: Bulletin de l'Institut Égyptien (Cairo). *B. Metr. Mus.*: Bulletin of the Metropolitan Museum of Art, New York. *B. Mon.*: Bulletin Monumental. *B. Mus. Brux.*: Bulletin des Musées Royaux des arts décoratifs et industriels à Bruxelles. *B. Mus. F. A.*: Museum of Fine Arts Bulletin, Boston. *B. Num.*: Bulletin de Numismatique. *B. R. I. Des.*: Bulletin of the Rhode Island School of Design. *B. Soc. Anth.*: Bulletin de la Société d'Anthropologie de Paris. *B. Com. Rom.*: Bollettino d. Commissione Archeologica Comunale di Roma. *B. Arch. Crist.*: Bollettino di Archeologia Cristiana. *B. Pal. It.*: Bollettino di Paleologia Italiana. *Burl. Mag.*: Burlington Magazine. *B. Soc. Ant. Fr.*: Bulletin de la Société des Antiquaires de France. *Byz. Z.*: Byzantinische Zeitschrift.

Chron. Arts.: Chronique des Arts. *Cl. Phil.*: Classical Philology. *Cl. R.*: Classical Review. *C. R. Acad. Insc.*: Comptes Rendus de l'Académie des Inscriptions et Belles-Lettres. *C.I.A.*: Corpus Inscriptionum Atticarum. *C.I.G.*: Corpus Inscriptionum Graecarum. *C.I.L.*: Corpus Inscriptionum Latinarum. *C.I.S.*: Corpus Inscriptionum Semiticarum. *Cron. B. A.*: Cronaca delle Belle Arti.

Eph. Ep.: Ephemeris Epigraphica. *Eph. Sem. Ep.*: Ephemeris für Semitische Epigraphik. *Exp. Times*: The Expository Times.

Gaz. B.-A.: Gazette des Beaux-Arts. *G.D.I.*: Sammlung der griechischen Dialekt-Inschriften.

I.G.: Inscriptiones Graecae (for contents and numbering of volumes, cf. *A.J.A.* IX, 1905, pp. 96-97). *I.G.A.*: Inscriptiones Graecae Antiquissimae, ed. Roehl. *I.G. Arg.*: Inscriptiones Graecae Argolidis. *I.G. Ins.*: Inscriptiones Graecarum Insularum. *I.G. Sept.*: Inscriptiones Graeciae Septentrionalis. *I.G. Sic. It.*: Inscriptiones Graecae Siciliae et Italiae.

Jb. Arch. I.: Jahrbuch d. k. d. Archäol. Instituts. *Jb. Kl. Alt.*: Neue Jahrbücher für das klassische Altertum, Geschichte und deutsche Litteratur und für Pädagogik. *Jb. Kunsth. Samm.*: Jahrbuch der Kunsthistorischen Sammlungen des allerhöchsten Kaiserhauses. *Jb. Phil. Päd.*: Neue Jahrbücher für Philologie und Pädagogik (Fleckeisen's Jahrbücher). *Jb. Preuss. Kunsts.*: Jahrbuch d. k. Preuss. Kunstsammlungen. *Jh. Oest. Arch. I.*: Jahreshefte des oesterreichischen Archäologischen Instituts. *J. Asiat.*: Journal Asiatique. *J.A.O.S.*: Journal of the American Oriental Society. *J. B. Archaeol.*: Journal of the British Archaeological Association. *J. B. Archit.*: Journal of the Royal Institute of British Architects. *J. Bibl. Lit.*: Journal of Biblical Literature. *J. E. A.*: Journal of Egyptian Archaeology. *J. H. S.*:

Journal of Hellenic Studies. *J. Int. Arch. Num.*: Διέθνῃς Ἐφημερίς τῆς νομισματικῆς ἀρχαιολογίας, Journal international d'archéologie numismatique (Athens). *J.R.S.*: Journal of Roman Studies.

Kb. Gesamtver.: Korrespondenzblatt des Gesamtvereins der deutschen Geschichts- und Altertumsvereine. *Kunstchr.*: Kunstchronik.

Mb. Num. Ges. Wien: Monatsblatt der Numismatischen Gesellschaft in Wien. *Mh. f. Kunstw.*: Monatshefte für Kunstwissenschaft. *Mél. Arch. Hist.*: Mélanges d'Archéologie et d'Histoire (of French School in Rome). *Mél. Fac. Or.*: Mélanges de la Faculté Orientale, Beirut. *M. Inst. Gen.*: Mémoires de l'Institut Genevois. *M. Soc. Ant. Fr.*: Mémoires de la Société des Antiquaires de France. *M. Acc. Modena*: Memorie della Regia Accademia di scienze, lettere ed arti in Modena. *Mitt. Anth. Ges.*: Mitteilungen der anthropologischen Gesellschaft in Wien. *Mitt. C.-Comm.*: Mitteilungen der königlich-kaiserlichen Central-Commission für Erforschung und Erhaltung der Kunst- und historischen Denkmale. *Mitt. Or. Ges.*: Mitteilungen der deutschen Orient-Gesellschaft. *Mitt. Pal. V.*: Mitteilungen und Nachrichten des deutschen Palästina Vereins. *Mitt. Nassau*: Mitteilungen des Vereins für nassauische Altertumskunde und Geschichtsforschung. *Mitt. Vorderas. Ges.*: Mitteilungen der vorderasiatischen Gesellschaft. *Mon. Ant.*: Monumenti Antichi (of Accad. d. Lincei). *Mon. Piot*: Monuments et Mémoires pub. par l'Acad. des Inscriptions, etc. (Fondation Piot.) *Mün. Akad.*: Königlich Bayerische Akademie der Wissenschaften, München. *Mün. Jb. Bild. K.*: Münchner Jahrbuch der bildenden Kunst. *Mus. J.*: The Museum Journal of the University of Pennsylvania.

N. D. Alt.: Nachrichten über deutsche Altertumskunde. *Not. Scav.*: Notizie degli Scavi di Antichità. *Num. Chron.*: Numismatic Chronicle. *Num. Z.*: Numismatische Zeitschrift. *N. Arch. Ven.*: Nuovo Archivio Veneto. *N. Bull. Arch. Crist.*: Nuovo Bullettino di Archeologia cristiana.

Or. Lit.: Orientalistische Literaturzeitung. *Or. Lux*: Ex Oriente Lux.

Pal. Ex. Fund.: Quarterly Statement of the Palestine Exploration Fund. *Πρακτικά*: Πρακτικά τῆς ἐν Ἀθήναις ἀρχαιολογικῆς ἐταιρείας. *Proc. Soc. Ant.*: Proceedings of the Society of Antiquaries.

Rass. d'Arte: Rassegna d'Arte. *R. Tr. Eg. Assy.*: Recueil de travaux relatifs à la philologie et à l'archéologie égyptiennes et assyriennes. *Rend. Acc. Lincei*: Rendiconti d. r. Accademia dei Lincei. *Rep. f. K.*: Repertorium für Kunstwissenschaft. *R. Assoc. Barc.*: Revista de la Asociacion artistico-arqueologica Barcelonesa. *R. Arch. Bibl. Mus.*: Revista di Archivos Bibliotecas, y Museos. *R. Arch.*: Revue Archéologique. *R. Art Anc. Mod.*: Revue de l'Art ancien et moderne. *R. Art Chrét.*: Revue de l'Art Chrétien. *R. Belge Num.*: Revue Belge de Numismatique. *R. Bibl.*: Revue Biblique Internationale. *R. Ép.*: Revue Épigraphique. *R. Ét. Anc.*: Revue des Études Anciennes. *R. Ét. Gr.*: Revue des Études Grecques. *R. Ét. J.*: Revue des Études Juives. *R. Hist. Rel.*: Revue de l'Histoire des Religions. *R. Num.*: Revue Numismatique. *R. Or. Lat.*: Revue de l'Orient Latin. *R. Sém.*: Revue Sémitique. *R. Suisse Num.*: Revue Suisse de Numismatique. *Rh. Mus.*: Rheinisches Museum für Philologie, Neue Folge. *R. Abruzz.*: Rivista Abruzzesa di Scienze, Lettere ed Arte. *R. Ital. Num.*: Rivista Italiana Numismatica. *R. Stor. Ant.*: Rivista di Storia Antica. *R. Stor. Calabr.*: Rivista Storica Calabrese. *R. Stor. Ital.*: Rivista Storica Italiana. *Röm.-Germ. Forsch.*: Bericht über die Fortschritte der Römisch-Germanischen Forschung. *Röm.-Germ. Kb.*: Römisch-Germanisches Korrespondenzblatt. *Röm. Mitt.*: Mitteilungen d. k. d. Archäol. Instituts, Röm. Abt. *Röm. Quart.*: Römische Quartalschrift für christliche Altertumskunde und für Kirchengeschichte.

Sächs. Ges.: Sächsische Gesellschaft (Leipzig). *Sitzb.*: Sitzungsberichte. *S. Bibl. Arch.*: Society of Biblical Archaeology, Proceedings.

W. kl. Phil.: Wochenschrift für klassische Philologie.

Z. D. Pal. V.: Zeitschrift des Deutschen Palästina Vereins. *Z. Aeg. Sp. Alt.*: Zeitschrift für Aegyptische Sprache und Altertumskunde. *Z. Alttest. Wiss.*: Zeitschrift für alttestamentliche Wissenschaft. *Z. Assy.*: Zeitschrift für Assyriologie. *Z. Bild. K.*: Zeitschrift für Bildende Kunst. *Z. Ethn.*: Zeitschrift für Ethnologie. *Z. Morgenl.*: Wiener Zeitschrift für die Kunde des Morgenlands. *Z. Morgenl. Ges.*: Zeitschrift der deutschen Morgenländischen Gesellschaft. *Z. Mün. Alt.*: Zeitschrift des Münchener Alterthumsvereins. *Z. Num.*: Zeitschrift für Numismatik.

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TWO ROMANESQUE SCULPTURES IN FRANCE BY ITALIAN MASTERS

WHILE discussing in a recent number of the JOURNAL¹ the early jamb sculptures of France, I was obliged to exclude from consideration those of Bourg-Argental (Loire) and in the museum of Le Puy, as they were known to me only from publications not sufficiently detailed to make an analysis of style possible. I have now, however, been able to visit the monuments on the spot, and as they throw no little light not only upon the question of jamb sculptures, but also upon broader aspects of Romanesque art, it seems well to add a note of supplement to my former paper.

The most striking fact that came to my observation at Bourg-Argental (Figs. 1, 2) was that the sculptures are the work of an artist whom I already knew well. This portal is obviously by the same hand that carved the capitals of the cloister of S. Orso (Figs. 3, 9) at Aosta in the years immediately following 1133.²

The sculptor of the S. Orso cloister is known to us as a follower of another anonymous artist who carved the pulpit at Isola S. Giulio (Fig. 4) *ca.* 1120. Besides the capitals at Aosta (Figs. 3, 9), there may be attributed to him three other capitals coming from the same cloister and now in a museum of Turin, and a statuette in the Metropolitan Museum of New York.³ I had already deduced from the style of the latter that our master had been in France,⁴ although I confess that this did not lessen my surprise at stumbling upon one of his works in the heart of the Cevennes.

That the Bourg-Argental sculptures (Figs. 1, 2) are really by the same master, not merely of the same atelier, does not seem to me open to doubt. The columns decorated with spiral rinceaux are a motive characteristic of the school, and which our artist appears to have taken over from his master at Isola S. Giulio (Fig. 4). These columns, the use of flinty marble, the strong classical feel-

¹ Vol. XXII, 1918, pp. 418 ff.

² See Porter, *Lombard Architecture*, I, p. 290; II, pp. 57, 60 ff.

³ Reproduced A. J. A. XXII, 1918, p. 419.

⁴ *Ibid.* p. 426.



FIGURE 1.—MASTER OF THE SANT' ORSO CLOISTERS: PORTAL AT BOURG-ARGENTAL.

ing, an adamantine hardness of attack are the most striking analogies which connect our portal with the Aosta cloisters. A closer examination reveals the same resemblance in details of execution. The convention used to indicate the eyes—unique I

think in mediaeval sculpture—the draperies, the peculiar broad noses, the treatment of the hair are all identical in the two works. The capitals at Bourg-Argental are indistinguishable in style from those of Aosta. There are the same angular metallic figures in the same contorted poses. The identity of workmanship is made all the easier to recognize by the strong individuality of our artist, which is sharply differentiated from that of all other sculptors of the period.

The sculptures at Bourg-Argental necessitate a revision in some details of the impression of this artistic personality gained solely on the basis of works previously known. At Aosta (Figs. 3, 9) I was able to detect but little trace of the influence of Nicolò and only distant echoes of that of earlier Lombard sculptors such as Guglielmo da Modena. Our artist seemed to derive his inspiration rather from the school of Pavia, and even here indirectly, by way of the Isola S. Giulio pulpit (Fig. 4). This pulpit itself seemed to me not purely Italian, but to show the influence of southern France in the classicism of its ornament.¹

The Metropolitan statuette showed two distinct influences which if found on the Aosta cloisters were so disguised as to be hardly recognizable. The first was the French feeling already referred to; the second was the evident imitation of Nicolò. In view of this I did not dare attribute the Metropolitan statuette to the hand of the Aosta sculptor, while recognizing that it was obviously of the same atelier.²

Now the sculptures at Bourg-Argental (Figs. 1, 2) make it clear that the Metropolitan figure is really by the Aosta artist, for they show that he underwent exactly these two influences. The very fact that he worked in France would be sufficient to justify the inference that he must have picked up some acquaintance with the French manner. We should, indeed, expect him to show precisely such traces of French influence as are exhibited by the New York figure. More than this the Bourg-Argental portal (Fig. 2) makes it clear that he adopted several purely French motives. The lunette with the Deity in an aureole surrounded by the evangelists and angels is certainly a weak imitation of Burgundian models. The type of face on the

¹ Porter, *Lombard Architecture*, I, p. 257. The St. Matthew is in certain respects strikingly similar to the St. Matthew in the upper part of the façade of the cathedral at Modena.

² See A. J. A. XXII, 1918, p. 426.



FIGURE 2.—MASTER OF THE SANT' ORSO CLOISTERS: TYMPANUM OF THE PORTAL, BOURG-ARGENTAL.



FIGURE 3.—MASTER OF THE SANT' ORSO CLOISTERS: CAPITAL OF THE CLOISTER OF SANT' ORSO, AOSTA.

other hand is closely analogous to that of the local school of Le Puy.

What is even more patent in the sculptures of Bourg-Argental, and rather surprisingly, is the influence of Nicolò. This appears not only in the smallish figures addossed to the colonnettes, which like the similar motive in the Metropolitan statuette could only have been derived from that master's work at Ferrara (Fig. 5) or Verona (Fig. 6). It, indeed, permeates the entire doorway. The rinceau and guilloche beneath the lintel are identical in spirit with those of the Ferrara portal. The lower register of the lintel is divided into scenes separated by an arcade. This motive was used by Nicolò at Piacenza (Fig. 7), and later repeated at Ferrara (Fig. 8). The pattern on certain of the colonnettes of this arcade at Bourg-Argental (Fig. 2) and Ferrara (Fig. 8) is the same. Inscriptions are placed on the horizontal bands dividing the registers at Bourg-Argental and at Piacenza (Fig. 7). The horse of the magi at Bourg-Argental (Fig. 2) repeats line for line the horse of the *Flight* in the Piacenza archivolt (Fig. 7), except in the head where quite evidently the inferior sculptor found himself unable to copy his model.¹ Even more striking, the *Annunciation* (Fig. 2) repeats almost exactly that of Ferrara (Fig. 8).

These observations are of some aid in determining the date of the Bourg-Argental portal. The style seems broader and more experienced than that of the Aosta cloisters. Bourg-Argental must, therefore, be later than 1133. It must, indeed, be later than 1135, since it shows copying of the Ferrara sculptures, executed in that year. I conjecture that it probably was carved between 1135 and 1140. That it was not later may be inferred from the fact that our sculptor betrays no acquaintance with the works of Nicolò at S. Zeno and the cathedral of Verona. S. Zeno was given its portal in 1138, while that of the cathedral dates from the following year.

The Bourg-Argental sculptures are extremely instructive in showing us exactly how artistic ideas were transmitted from one country to another in mediaeval Europe. We see in them our artist carrying the art of Nicolò half across the continent, from Ferrara to the Cevennes. We are somewhat less amazed than

¹ Our artist was more successful in a capital of the S. Orso cloisters (Fig. 9). But the superb horse of Nicolò's St. George at Ferrara was beyond even his ambition (Fig. 8).



FIGURE 4.—PULPIT AT ISOLA SAN GIULIO, LAGO D'ORTA.

before at the close analogies which exist between the sculptures of the school of Poitou and those of northern Italy.

It is even possible to follow the infiltration of Nicolò-esque influences one step further. The jamb figures in the museum of

Le Puy (Fig. 10) are evidently derived from Bourg-Argental. This is clear from the draperies, the scrolls, the gestures with which the scrolls are held, the socles, and the capitals. The "Karitas" on the capital of the foremost colonnette of the Le Puy museum (Fig. 10), indeed, is copied exactly from the precisely similar figure on the outer right-hand capital at Bourg-Argental (Fig. 1). The derivation of the Le Puy sculptures is, therefore, not open to doubt.¹

The fact that Nicolò's jamb sculptures had found their way half the distance from Ferrara to Paris within, it seems, five years of the time that they had been created in Italy shows how quickly artistic ideas were transmitted and passed from one country to another at this period. The exact knowledge thus gained also makes a closer examination of the entire subject of jamb sculptures necessary.

One's thought naturally turns to the holy-water font at Chamalières (Haute-Loire), since geographically

¹ Something in the faces of these figures suggests acquaintance with St.-Etienne of Beauvais. Were they blown upon by winds from the north as well as from the south?



FIGURE 5.—SCULPTURE ON JAMB,
FERRARA: NICOLÒ.



FIGURE 6.—JAMB OF THE CATHEDRAL, VERONA: NICOLÒ.

this is situated in the same region with the monument we have just been studying. I formerly supposed that this basin (Fig. 11), notwithstanding its obviously Nicolò-esque character, was later than 1140, being misled by the style of one of the heads, as seen in photographs. This head, however, I find upon study of the monument itself, is no part of the original sculpturè, but brought from elsewhere and arbitrarily added by modern restorers. I am now very far from sure that the Chamalières basin is later than 1140.

A close study of the style of this basin has, indeed, convinced me that like the Bourg-Argental portal, it too is by the hand of a



FIGURE 7.—LINTEL OF THE CATHEDRAL, PIACENZA: NICOLÒ.



FIGURE 8.—LINTEL OF THE CATHEDRAL, FERRARA: NICOLÒ.

Lombard sculptor. This hand, in fact, is none other than that of Nicolò himself.

Not only is the Chamalières basin by Nicolò, but it dates from his Ferrarese period. The style is far more suave and developed than in his earlier productions at Piacenza (Fig. 7). On the other hand it is less mannered than the jamb sculptures of Verona (Fig. 6). When, however, the Chamalières basin is compared with the jamb sculptures of



FIGURE 9.—MASTER OF THE SANT' ORSO CLOISTERS: CAPITAL OF THE CLOISTER OF SANT' ORSO, AOSTA.



FIGURE 10.—FOLLOWER OF
THE MASTER OF THE SANT'
ORSO CLOISTERS: SCULP-
TURES OF THE HOTEL DIEU:
MUSEUM, LE PUY.

Ferrara (Fig. 5), it is evident that we have in the two works the closest analogies. There are the same draperies, the same hands, the same eyes, the same beards, the same noses, the same lips, the same scrolls, the same niches, the same hair. Indeed, the basin at Chamalières resembles the jambs of Ferrara much more closely than do Nicolò's signed works at Sagra S. Michele and Verona. It seems, therefore, impossible to doubt that it is by his hand.

The question arises how this work found its way into the heart of the Cevennes. Did Nicolò, like his pupil, the master of the S. Orso cloisters, undertake a journey into the Velay? There is plenty of evidence in his works to show that he did travel in France, although rather in the southwest, in Languedoc and Aquitaine. It seems to me, however, more probable that this basin was exported from Italy, and carried to Chamalières. It will doubtless be objected that the basin is an exceedingly weighty object to have been transported in this manner. Yet we know that far more complicated shipments were made in the twelfth century. The great ambulatory columns of Cluny, for example, the transportation of which would be something of a problem at

the present day, and in comparison with which the Chamalières basin seems a mere trifle, were brought all the way from Rome to Burgundy. The transportation of the Chamalières basin would have been all the easier, because it could have been sent most of the way by water, across the sea and up the Rhone.

If we assume that the basin was thus imported, we can explain two facts that otherwise would be puzzling. The first is that

Nicolò never betrays in his work acquaintance with the local style of the Velay; and the second that his hand and even his influence, at least so far as I can see, are absent from the other sculptures of Chamalières. Had the great Nicolò "so famous among sculptors" actually been there, it is difficult to believe that advantage would not have been taken of his presence to procure other works. If, however, we suppose that the basin was imported, all is explained.

I am even tempted to imagine that the journey of the master of the S. Orso cloisters to Ferrara may not have been unconnected with the purchase of the basin. There is at least no doubt that that artist saw Nicolò's work at Ferrara, and that the basin was made by Nicolò at precisely this time. I offer this suggestion of course as a mere conjecture. The certain thing is that the basin of Chamalières was executed by Nicolò and about the year 1135.



FIGURE 11.—HOLY-WATER BASIN, CHAMALIÈRES: NICOLÒ.

The history of the motive of jamb sculptures begins in the light of these facts to seem somewhat less obscure. We see the idea, initiated by Guglielmo at Cremona before 1117,¹ taken up and developed by his pupil Nicolò in 1135 at Ferrara (Fig. 5). We see the motive in Nicolò's version spreading immediately into France. The basin at Chamalières (Fig. 11) is by Nicolò's own hand. The jamb figures of Bourg-Argental (Fig. 1) are by a follower. Those of Le Puy (Fig. 10) are derived from Bourg-Argental. The similar figures of St.-Etienne of Toulouse² are for me without doubt also inspired by the art of Nicolò.

¹ The jamb sculptures at Cremona have been frequently illustrated, *e.g.*, *A.J.A.* XXII, 1918, p. 416.

² Illustrated, *e.g.*, *A.J.A.* XXII, 1918, p. 418.

The question remains where and how did the builders of St.-Denis¹ become acquainted with the motive. This I shall immediately confess I am unable to answer.

I shall only observe, in the hope of throwing some one else on the track of a solution, that St.-Denis is a compound of inspirations derived from many quarters. Suger appears to have gathered ideas from the four corners of the world. In his work we find combined with the building forms indigenous to the Ile-



FIGURE 12.—CAPITAL IN THE CRYPT OF ST.-DENIS.

de-France, sexpartite vaults of Normandy, sculpture of Aquitaine, and voussures of Saintonge. M. Mâle would have us believe that even the humble work at Beaulieu contributed its quota, and it may be suspected that St.-Basilie of Etampes was also drawn upon. Whence the stained glass came, no one knows, but it is hardly likely that Suger invented the art. The windows of St.-Denis are obviously not the first attempt of a novice, but the production of artists who were working in a medium with which they were well acquainted. Suger, moreover, expressly

¹ One of Montfaucon's engravings is reproduced, *A.J.A.* XXII, 1918, p. 400.

states that his glass-workers were imported. It is also sure that Suger was in touch with the building operations at Cluny. He writes of bringing marble columns from Rome by water in obvious



FIGURE 13.—JAMB OF ST.-DENIS.

imitation of what, as we have already mentioned, had actually been done at the Burgundian monastery.

It is not less certain that the architecture of St.-Denis was influenced by Lombardy, especially in its ornamental and decorative details. The mosaics were assuredly purely Italian. The caryatids of the western portal are a characteristically Guglielmo-esque motive, and have Guglielmo-like draperies (Fig. 13).

Nothing could be more completely Lombard than the lion with his tail between his legs supporting the colonnette. This colonnette itself¹ is decorated with spirals and ornaments in the manner we have observed to be peculiar to the masters of the Isola S. Giulio pulpit and the S. Orso cloister. The reliefs of the zodiac show striking analogies with the sculptures of the same subject at Modena. A capital of the crypt has on the abacus a completely Lombard anthemion (Fig. 12). The angels in the voussures, heavy and expressionless, are of Lombardie, rather than of



FIGURE 14.—SCULPTURES OF LA DAURADE: MUSEUM, TOULOUSE.

Aquitanian type. The figures of the virgins in arches surmounted by tabernacles recall Guglielmo's prophets at Modena. The peasant quality of the broad squat figures is also reminiscent of Guglielmo.

It seems certain, therefore, that the sculptors of St.-Denis were familiar with the work of Guglielmo at Modena. I cannot, however, detect evidence that they were acquainted either with Cremona or with the works of Nicolò. It should be borne in

¹ It is of course modern, but perhaps copied from an authentic ancient fragment.

mind in this connection that Modena is on the Via Emilia, and hence upon the route taken by French travellers, while Cremona and Ferrara would both be out of their way. It seems to me, therefore, possible, but not certain, that the builders of St.-Denis derived their jamb sculptures from Italy directly.

On the other hand it is admitted that the artists of St.-Denis copied freely the sculpture of Aquitaine. But the jamb sculptures of La Daurade at Toulouse (Fig. 14) seem to me very clearly to be derived from, rather than prototypes of, St.-Denis and Chartres: and it remains quite uncertain whether there exists in Aquitaine any example of jamb sculptures anterior to 1140. At all events, the facts that the portal of Bourg-Argental is by the master of the S. Orso cloister, and that the Chamalières basin is by Nicolò, will, I trust, furnish a secure starting-point for future investigations.

A. KINGSLEY PORTER.

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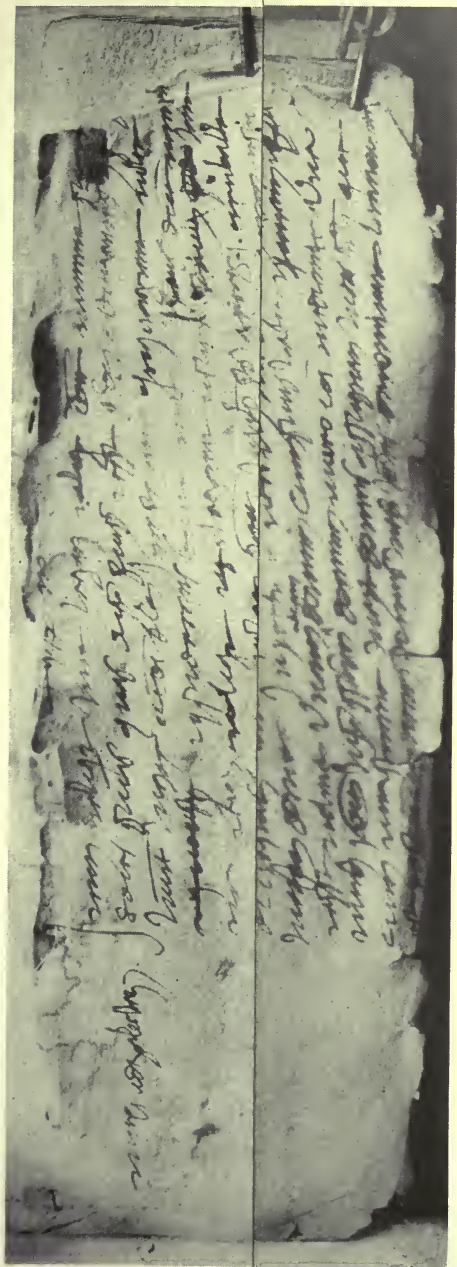
[PLATE I]

ON Sept. 14th, 1522, Andrea di Marco della Robbia made his Last Will and Testament (Doc. 2) and on Feb. 18th, 1522 (modern style 1523), added a Codicil (Doc. 3) to it. The discovery of these documents is due largely to Gaetano Milanese, who found the Registration Entry (Doc. 1) of the Will in the Register of the Opera di Santa Maria Novella. As this entry gives the name of the notary (Ser Giuliano di Ser Domenico da Ripa) who drew the instrument, I was able to locate it and the Codicil among his papers.¹ It seems more than probable that Milanese contented himself with the information given in the Registration Entry² and that he never saw the Will, Codicil, or Revocation, as no further reference is made to them in his *Miscellanea*. In any event he appears to have made no transcription of them, and, so far as I know, Documents 2, 3, and 4 have not been deciphered before. Accordingly, I have felt that a new and useful contribution has been made to the study of the life of Andrea della Robbia in bringing these documents to light.

The Will consists of two sheets of paper, three sides of which are covered with the atrocious handwriting of Ser Giuliano, and the Codicil of one sheet, both sides of which are filled with his chirography. The Revocation was written by Ser Giovanpiero Borghesi, and is in a bound volume of his notarial writings; his handwriting, however, is much better than that of his col-

¹ It may be well to explain that Documents 2, 3, and 4 are copies of the original Will, Codicil, and Revocation, and were kept by the notaries, who drew the instruments, as records of the transactions. The executed instruments themselves were deposited with the city authorities and are probably no longer in existence. However, the information given by these copies is as full as that which the originals themselves supplied, as they give the complete texts of the originals, with the exception of the signatory clauses which could have given little, if any, further information of value.

² His partial transcription of which I found when searching the numerous volumes of his notes, now preserved in the Communal Library of Siena; the note in question being in Milanese, *Miscellanea*, 39, III, P. c. 23.



THE WILL OF ANDREA DELLA ROBBI, PAGE 2: FLORENCE.

league. Aside from the difficulty presented by Ser Giuliano's handwriting, the task of transcription has been rendered still more arduous by the many abbreviations, cancellations, and interlineations, which appear in the original texts of Documents 2, 3, and 4; and, except for the cordial and precious aid received from Dr. Umberto Dorini, Dr. Achille De Rubertis and Dr. Giovanni Cecchini of the Florentine Archives, I should have been constrained to publish the documents with many omissions. Thanks, however, to their generous efforts the documents appear below practically in their entirety; and it is a pleasurable duty to express to these gentlemen my lively appreciation of and gratitude for the incalculable assistance which has been received at their hands.

In view of the importance of the documents, I have thought it well to publish with them a photograph of the second page of the Will (PLATE I) in which appear the legacies to Andrea's wife, Domina Nannina, and the first part of the long clause dealing with those bequeathed to his three lay sons Giovanni, Luca, and Girolamo. The reader, with the document reproduced before him, will be in position to appreciate the difficulties which presented themselves to the transcriber.

Turning now to an examination of the Will itself, we find that it was executed in the Sacristy of the Church of San Marco, and before seven witnesses as prescribed by law. It may not be out of place to explain that the word "*hore*" is an old form of *ore*, from *os* meaning mouth. The quaintly worded preamble calls for no comment; nor do those clauses, to which no specific reference is made, as their meaning is clear.

The second clause, in which the testator bequeathes lib. 3 to the Opera di Santa Maria del Fiore, appears generally in wills of the early part of the sixteenth century (how much later I do not know) and represents the customary charge for registering the instrument. This charge seems to have varied between lib. 3 and lib. 4 and was destined to help pay for building operations connected with the Cathedral and the new city walls.

In Clause 4 the nuns mentioned were Andrea's daughters, Caterina and Margherita, who took the habit in the Dominican Monasterio di San Luca in 1496 and 1502 respectively.

It will be observed in the sixth clause that Andrea's wife, Domina Nannina, besides having the entire use of the *podere* (farm) at San Giorgio a Ruballa to recompense her for her

dowry, is also given free entry and certain other rights in the home bequeathed by Andrea to his youngest son, Girolamo.

In the long eighth clause the testator divides the remainder of his property in equal portions between his three lay sons Giovanni, Luca, and Girolamo. The words, "*volens tollere scandala que solent sepe oriri in divisionibus bonorum*" (wishing to dispel the scandals which are accustomed to arise often in the division of property), were put in by Andrea probably because of his own experience as a legatee. It will be recalled that his uncle, Luca di Simone della Robbia, bequeathed the *bottega* and its good will to Andrea and the rest of his possessions to Simone, Andrea's brother, giving as his reason for so doing that Andrea, having been trained by him as his successor in the craft, had a prosperous business at his command; but that Simone, not having had the benefit of similar training, was not equipped to face the world as well as his brother, and that, therefore, everything that his uncle owned outside of the *bottega* should with propriety go to him. This division of Luca's estate seems to have aroused bad feeling between the brothers, for we find in the records of the Capitolo della Metropolitana, to which the della Robbia house on Via Guelfa belonged, that in 1485¹ Simone ceded all his rights in the home to Andrea and left it. Later documents show that he settled in the Popolo di Sant' Ambrogio. This family quarrel appears to have lasted until death, as the records of Simone's decease in 1521 state that he was buried in Sant' Ambrogio instead of in the family vault in San Piero Maggiore. It seems highly probable, therefore, that Andrea had this regrettable experience very vividly in mind when he made his own will and that he did all that he could to avoid a similar scandal after his death by leaving his property to his three sons, share and share alike. The words "*et dividet domos*," which follow immediately after the extract cited above, were an afterthought of the notary as will be seen in the photograph of the Will. As they are clearly parenthetical, they have been placed between commas in the transcription, although they do not so appear in the original. A learned Italian friend of the writer has made the interesting suggestion that these words are a covert reference to Luke XI, 17, "a house divided against a house falleth."

As to how Andrea made provision for the homes for his three sons I refer the reader to the Will itself, merely pointing out that

¹ 'Nuovi Documenti Robbiani,' *L'Arte*, XXI, 1919, pp. 190 ff.

the furnace and mixing troughs used by Andrea for his craft were in a room between the kitchen and the garden of the house on Via Guelfa. This room, known as the "*anticucina*," was bequeathed to Girolamo, although the text would seem to indicate that Giovanni was also to share in its use. Prior to the discovery of the Will, it was assumed that the furnace was located in the garden.

Coming now to the Codicil we observe that it was executed in Andrea's home on account of his ill health ("*licet corpore languens*") and in the presence of but five witnesses, the number prescribed for a Codicil according to the law of that time. In the first clause Andrea limits the legacy to his daughter, Maria, to the lifetimes of herself and her husband, Tomaso Fantini. The latter died between 1522/23 and June, 1524. Thereupon Ser Giuliano cancelled part of the clause and wrote the marginal note to the effect that, as Tomaso had died, nothing was due to Maria and the legacy was null and void. In Clause 2 Andrea alters his disposition regarding the homes bequeathed to Girolamo and Giovanni, and finally leaves the sole use of all the "*anticucina*" with the furnace and mixing troughs to Giovanni. Girolamo is compensated for the loss of his interest in the "*anticucina*" by the bequest of a small room in the home willed to Giovanni, subject to certain conditions.

On June 3rd, 1524, apparently in the Assembly Hall of the Guild of the Masters of Stone and Wood, Andrea revoked (Doc. 4) his Will and, as he gave no reasons for his action, we can only surmise as to what they were. It seems very probable that the contents of his Will and Codicil were known to his heirs and that they caused dissatisfaction, as Luca does not appear to have received as much consideration as Giovanni and Girolamo did. It may also have been the case that each of the brothers coveted the furnace and mixing troughs, the sole use of which had been left to Giovanni, and that the old father was pestered by the other two sons to make changes in the Will in their favor. Such suppositions may explain why Andrea revoked his will as the only way out of the difficulty, since, if he died intestate, the law would arrange for the division of his possessions among his heirs. If this supposition be true, Andrea's wife must have been dead, as, had she been alive, he would certainly have made some provision for her, even if he was unwilling to take any action as regards his sons. But, whether these suppositions be true or

false, the facts are that after he had revoked his Will, Andrea never made another, although he lived until Aug. 4th, 1525. That he did not do so is clearly proved by the petition¹ made by Giovanni in July, 1529, for the purpose of securing his third of his father's inheritance. In this petition Giovanni declared that his father "*mortuum esse et decessisse ab intestato.*"

On Jan. 31st, 1529 (modern style 1530), Giovanni paid the fee for registering his claim (as also probably those of Luca and Girolamo, which had been sent by them from Paris, as we know from documents) as is seen in Doc. 1, and it is fair to assume that he received his inheritance at about that time. Fate willed that he was not to enjoy it long, for he died before March 24th of the same year, doubtless of the plague, as no record of his death is to be found in the *Libri dei Morti* either of the Officio della Grascia or of the Guild of Physicians and Apothecaries. In the number of *L'Arte* last mentioned a document will be found stating that Giovanni's wife was a widow prior to March 24, 1529 (modern style 1530). Giovanni's death was doubtless recorded in the books of the Misericordia, where all deaths from contagious diseases were noted, but my researches in the Archives of the Brotherhood did not result in the discovery of any record of those who died of the plague during February or March, 1529/30.

DOCUMENTS

1. (At the top of the page: Ser Giuliano di Ser Domenico da Ripa)

Andreas Marci Simonis della Robbia condedit
testamentum die 14 Septembris 1522. Here-
des instituit Johannem Lucam et Jeroni-
mum eius filios.

lib. 3-15

Die 31 Januarij 1529 (modern reckoning
1530) solvit Johanni marie de Corbi-
nellis camerario c. 4 lib. tres cum $\frac{9}{4}$
(quarto) Johannes Andree della Robbia.

lib. 3-15

[*Archivio di Stato, Archivio Notarile Appendice, Registro di Testamenti Santa Maria Novella, N° VIII, segnato Cod. 89 c. 98*]

2. (In margin six notes all in the handwriting of Ser Giuliano, except N° 2, which appears to have been added in the 18th or 19th century with the day of the month incorrectly given: Testamentum Andree Marcj della Robbia—1522 4 (*sic*) settembris 177—Sunt codicillos in manu mei—Mixi ad operam—Data fides ut patet—Est revocatus manu ser Johannis petrij de Borghesis.)

¹ Published by me in 'Nuovi Documenti Robbiani, Seconda Serie' *L'Arte*, XXII, 1919, p. 110.

+yhs

In Dominj Nomine Amen Anno Dominj Incarnationis 1522 Indictione x et die 14 settembris Actum Florent. jn populo Scī Laurentij Florentie et jn sagrestia ecclesie Scj Marcj de Florentia presentibus jbid venerabilibus viris

Fratre Paulus Johannis de Cavalcantibus de Prato

Fratre Pacifico Filippi de Gualteritis

Fratre Nicholaio Mariotti de Sexto

Fratre Bartolomeo Pauli de Finis

Fratre Johanni Ser Lionardi de Florentia

Fratre Angelo Petrj de Beninis

Fratre Francisco Johannis de Dinis

omnibus fratribus conventus Scj Marcj Florentie testibus ad infrascripta omnia et singula vocatis habitis et rogatis proprio hore infrascripti testatoris

Cum nihil sit certius morte nihilque incertius hora eius hinc est quod prudens vir Andreas Marcj Simonis della Robbia popolj Scj Laurentij Florentie sanus per Dei gratiam sensu mente intellectu et corpore volens dum mens salubre est posteris de suis providere nolens intestatus decedere sed de suis bonis providere per hoc suum nuncupatum testamentum quod dicitur sine scriptis de bonis suis disposuit fecit et ordinavit jn hunc qui sequitur modum et formam viz—

In primis quidem animam suam Omnipotentj Deo Eiusque Gloriose Matrj Marie semper Virginj et toti Celeste Curie Paradisi humiliter ac devote racommandavit corporis autem suj sepulturam elegit jn sepulcro suorum predicesorum sito jn ecclesia Scj Petrj Maioris de Florentia et circa eius funus fierj voluit quod et quantum videbitur infrascriptis suis heredibus.

Item jure legati reliquit et legavit Opere Scē Marie del Fiore de Florentia nove sagrestie nuovi operi murorum jn totum sechundum ordinamenta Comuni predicti libras tres f.p.

Item amore Dei et pro remedio anime sue voluit et reliquit quod infra otto dies proximos futuros post mortem dictj testatoris quod in ecclesia Scj Marcj celebrentur misse de Scj Gregorj et pro elimosina teneantur dare infrascripti sui heredes Florenum unum aurj largum in auro.

Item reliquit Sorori Sperantie et Sorori Angeline et cuilibet earum pro remedio anime sue Florenos decem auri largos in auro et ultra rasciam et pannum condecetes pro uno vestitu pro qualibet earum.

Item reliquit Marie sue filie pannum pro una cioppa (cappa) et unum strigatorium tempore mortis dictj testatoris et ultra predicta eidem reliquit quolibet anno quosque vixerit Florenos novem largos in auro et stinta eius vita naturalj presens legatus evanescat.

(At the head of the second page: + yhs Me (Marie). In margin: Mixi ad gabellam)

Item reliquit jure legati Domine Nannine sue (here the paper is torn but the missing words must be "*uxori per*") dotes suas quas dixit fuisse et esse Flor. ottingentos (here again the text is mutilated and the missing words were probably "*largos auri quos*") habuit jn contantibus a Comuni Florentie jam sunt annj quinquaginta et ultra et considerans bene merita ipsius Domine Nannine eidem reliquit et legavit usum fructum integrum praedij dictj testatoris positi in populo Scī Giorgij a Ruballa infra suos confines cum omnibus suis pertinentiis et cum usu omnium masseritiarum et besteaminarum et

bonorum mobilium existentium super dictis bonis tempore mortis dicti testatoris et ultra predicta reddam (reditum) in domo dicti testatoris infra assignate in portione infrascripti Hieronimi et usum camere cum omnibus suis fulcimentis tam de lignamine quam pro usu lettiere lettucej et cum lettis fornitis pro omni tempore et prout verioris retineat et retinet ipse testator ac etiam usum omnium suorum dicte domine pannorum lintorum et lanorum pro usu sui dorsj quousque vixerit. Et presens legatus voluit durare quousque non petierit dotes suas et liberavit dotes ab honore satisfaciendj et fidem prestandj decitandj (?) et faciendj ad arbitrio boni viri et a quacumque confectione inventarij qui intendet et vult ipsam terram ad restitutionem bonorum predictorum tam mobilium quam imobilium prout erunt et que et non essent usu consumpta.

Item reliquit eidem domine panna et strigam condecetes pro bruno faciendo per dictum testatorem.

In omnibus autem suis bonis suos heredes universales instituit fecit et esse voluit Johannem Lucam et Hieronimum suos filios legitimos et naturales equis portionibus et, volens tollere scandala que solent sepe oriri in divisionibus bonorum, et dividet domos, in portione dictj Luce de bonis imobilibus jure legati reliquit et posuit unam domum cum suis habitationibus et pertinentiis positam in populo Scj Laurentij Florentie et in via que dicitur la Via Guelfa cuj a primo dicta via a ij palatium Domine Magdalene olim Petrj de Sassetis a iij infrascripta domus posita in portione dictj Hieronimj a 4 bona Capitolj Scē Marie del Fiore de Florentia. Pro tanto quanto est per latitudinem domus predictae una cum orto vinea que est retro dictam domum pro tanto quanto capiet latitudo domus predictae procedentem per altitudinem prout traet paries dividens domum predictam a domo infrascripti Hieronimj cum omnibus pertinentiis domus predictae et que domus et vinea est libera dicti testatoris et cum honore quod dictus Lucas non possit aliquid repetere ab heredibus dicti testatoris de his que hodie est creditor dictus testator et hoc quod domus ipsa est melioris conditionis infrascriptarum domorum. In portione vero dictj Hieronimj de bonis mobilibus jure legati reliquit posuit et esse voluit unam aliam domum cum suis habitationibus et pertinentiis et finimentis positam juxta suprascriptam domum muro comuni mediante una cum una stantia infrascripte domus assignare infrascripto Johanni, que est post cucinam domus infrascripti Johannis denominata lanticucina (here the third page commences with heading +yhs M*) in qua anticucina est furnus et truogoli reservato tamen (at this point the text is mutilated but the missing word was probably "arti") victrierarie, pro faciendo unum auditum ad ortum pro domo dictj infrascripti Johannis braccia duo cum dimideo alterius bracci juxta parietem dividendum domum datam dicto infrascripto Johanni et domum Andree Venitianj in quibus brachijs duobus cum dimideo teneatur dictus Johannes fieri facere suis sumptibus unum parietem dividendum dictum andronem fiendj et residuum dicte stantie dicte antiquoquina (*anticucina*). Et in dicta portione domus date dicto Hieronimo voluit venire totum ortum qui fuit comprehensus a linea ortus datj dicto Luce usque a lineam rettam prout trahet linea recta dicti parietis fiendj per dictum Johannem ad cordam adeo quod ortus dictj Hieronimj erit pro tanto quanto capiet domus sua sibj sibj data (?) ac etiam pro tanto quanto capiet infrascripta domus data dicto infrascripto Johanni restens in portione dictj

Hieronimj, posuit totam integram vineam infrascripti ortus et in capite ortus dicte domus in portione supradictj Luce infra versus viam dictam Via Mozza adeo quod tota vinea que rimaneat non data dicto Luce in sua portione restet et sit in portione dictj Hieronimj cum honere tamen solvendj Capitolo Ecclesie Florentine libras quinque et sol. 4 quolibet anno pro livello debito pro dicta domo et hoc pro raguaglio eius in quo et de quo ipse Hieronimus est creditor dictj testatoris quod voluit per eum pati possi. Et cuj domus a primo via predicta et a ij domus dictj Luce a iij domus infrascriptj Johannis a 4 Capitulum Florentinum.

In portione vero partis dictj Johannis de bonis mobilibus jure legati reliquit et posuit unam aliam domum positam juxta dictam domum datam dicto Hieronimo cum his infrascriptis duobus brachijs cum dimideo pro faciendo dictum andronem et cum toto residuo ortus rimanentis a dicta dirittura procedenti a dicto muro faciendj in dictis duobus brachijs cum dimideo supra versus Viam Mozzam et usque ad sepem qua sepes rimaneat et sit in portione dictj Hieronimj cuj domus a primo via a ij dicta sepes a iij domus dictj Hieronimj a iij dictus Andreas Venetianj et cum honere solvendj anno quolibet Capitolo Ecclesie Florentine libras quinque et sol. quatuor pro suo livello. Declarans quod puteus in quoquina (*cucina*) sit in comuni cum infrascriptis Hieronimo et Johanni. Et licet etc.

(On the fourth page, otherwise blank, the following notations: +yhs Me+—Cassans etc.—Ego Julianus olim Ser Dominicj Juliani de Ripa notarius Florent. dedi rogatus etc.)

[*Archivio idem, Rogiti di Ser Giuliano di Domenico da Ripa, Filza di Testamenti 1490-1546, segnato Notai G 532 N° 177*]

3. (In margin four notes all in Ser Giuliano's handwriting except the second which was written by the same hand which inscribed the similar note on the Will: Codicilli Andree Marcj Simonis della Robbia 1522 (modern style 1523) 18 februarij 183—Mixi ad operam—^xnon petierit dicta Maria cum viro suo et non ultra hic debeantur quod viro suo mortuo et evanescat presens legatus)

In Dei Nomine Amen Anno Domini Incarnationis mille quingento vigintesimo sechondo iudictione vj et die xvij mensis februarij 1522 Actum in populo Scī Laurentij Florentie et in domo infrascripti codicillatoris presentibus

Fratre Bartilozo Johannis de Cavalcantibus

Fratre Damiano Marcj de Beninis

fratribus Scī Marcj Florentie

Johanni Leonardj de Manischalcis

Marcello Leonardj de Vernacis

Francisco Julianj de Bonis

civibus Florentinis

Omnibus testibus ad infrascripta omnia et singula proprio hore infrascripti codicillatoris vocatis habitis et rogatis etc.

Cum ambulatorio sit voluntas usque ad mortem hinc est quod prudens vir Andreas Marcj Simonis della Robbia populi Scī Laurentij Florentie sanus per Dei gratiam mente sensu et intellectu licet corpore languens renumpans et recordans quod alias dictus Andreas manu mej notari infrascripti sub die xiiij mensis septembris proxime preterite vel alio die veriorj suum condedit testamentum in quo pro hoc similiter disposuit inter alia que in eo continentur

post dictum conditum testamentum mutata sua voluntate circa infrascripta quodam in eo continentur hac particularj dispositione de bonis suis per hos presentes codicillos disposuit et ordinavit et fecit jn solitum modum et formam viz—

In primis renunsians quod in dicto suo testamento reliquit Marie sue filie anno, quolibet quousque vixerit Florenos novem largos jn auro mutata sua voluntate ut infra voluit et declaravit quod eidem Marie debeantur dicti Floreni novem largi jn auro quosque^x ipse vixerit durabit vita naturalis Tomasij Marej Fantinj virj et maritj dicte Marie et non ultra et stinta vita dietj Tomasij etiam postquam vixerit ipse Domina Maria sive non huismodj legatus evanescat (after the death of Tomasus all the words from the "X" up to and including the word "evanescat," were cancelled and the 4th note at the head of the will should be read at this point). Et voluit quod ad solvendum dictos Florenos novem teneantur quilibet dictorum suorum heredum jn dicto testamento institutos pro Florenis tribus et non ultra et voluit quod dicta Maria non possit illos patere nisi a quolibet dictorum predictorum heredum prout patet et non possit illos consequi nisi super bonis cuiuslibet dictorum suorum heredum et obumatorum (this word does not appear in the dictionaries but is probably an old synonym of "successorum") in portione sive ex bonis testatoris pro parte tangenti cuilibet ex suis heredibus.

(The second page begins at this point)

Item renuntans instituisse suos heredes Lucam Johannem et Hieronimum suos filios et eis divisisse et cuilibet eorum dedisse certam portionem suorum jmmobilium prout jn testamento et jn portione Hieronimj fuisse cum domo data dicto Hieronimo unam stantiam denominatam anticucina que est jn domo data dicto Johanni. Et voluit quod Johannes teneatur facere unum andronem juxta murum dividendum domum datam dicto Johanni et domum Andree Venitianj brachiorum duorum cum dimideo cum muro fiendo de novo pro dividendo anticucinam a dicto androne et prout jn testamento latius apparet mutata sua voluntate voluit quod dicta antiquoquina restet integra dicto Johanni et quod dictus Johannes teneatur facere hostium pro intrando jn orto juxta dictum murum Andree Venitianj et non maioris latitudinis brachiorum duorum cum dimideo adeo quod hostium predictum possit capere integram viottolam dicti ortus existentis (two indecipherable words follow) semper colupna de lateribus que est supra angulo dietj viottolj prope vineam domus jn portione ortus dietj Hieronimj et residuum ortus restantis juxta dictam columnam et versus Viam Mozzam restet et sit dicto Johanni usque ad viottolam sepis que sepes cum viottola existenti juxta sepem et ortum dietj Johannis usque ad (a word indecipherable) sursum (?) eum (?) Et ad tollendum pasculum declaravit quod integra sepes predicta pro tanto quanto capeat ortus dietj Johannis et viottolus juxta dictam sepem et ortum dietj Johannis sit et veneat jn portione dietj Hieronimj.

Et loco dicte antiquoquine posuit et venire voluit unam stantiolam que est jn domo data dicto Johanni et respondit cum fenestra jn lodia dietj Hieronimj jn qua hodie sit paries cum palatio existanti supra ea et cum tetto et sit afondamentis usque ad celum. Et teneatur dictus Hieronimus facere jntraturam jn dicta stantiola jn androni domus dietj Hieronimj et introitus (a word indecipherable) intrantis jn dicta stantiola debeant renunciarij. Declarandum per hos presentes codicillos quod paries existens dimideo juxta domum datam

Hieronimo et domum datam Johanni dividet domos ipsas afundamentis usque ad celum.

Cassans anti etc. confirmans etc.

Et hans etc.

Ego Julianus Ser Dominiej de Ripa notarius florent. rogatus etc.

[*Archivio idem, Filza idem N° 183*]

4. (In margin: Revocatio testamenti)

1524 Indictione 12 et die tertio mensis junij Actum Florent. in Arte Magistorum (Lapidum et Legna) presentibus

Cante Michaelis Cantis provisorie dicte Artis

Michaelle Pieri Cini de Lucherellis cive Florent. populi Scī Laurentij de Florentia

Jobatiste Aloisij Antonii de Guidottis cive Florent. populi Scī Marcj de Florentia

Tomasus Dominiej Filippi de Rinvccis cive Florent. populi Scē Margherite de Florentia

Francisco Soldj Batiste Chappucceris cive Florent. populi dicti

Dominico olim Lari Andree Lari cive Florent. habitante in Castro Vici Vallis Else

Testibus ad infrascripta omnia proprio hore infrascripti Andree de Robbia vocatis habitis et rogatis etc.

Cum sit quod Andreas olim Marci de Robbia civis Florent. jam sunt duo anni preterite elapsi vel circha prout vidi recordari manu Ser Julianj Ser Dominici de Ripa notari Florent. vel alterius notari Florent. suum condedit testamentum in quo et pro quo in est etc prout asservit fecit et ordinavit quodam leghatum et seu voluit et alia de quibus postea dissit se multotiens penituisse et continue penitere attento notaro quod testamentum predictum de facto et absque premeditatione aliaqua condedit et ordinavit: et adeo intendens dictum testamentum et omnia in eo contenta de presente revocare ad hac ut aliud aliter et alio modo maturo consilio et consulte suo loco et tempore condere ordinare et perficere possit et valeat: qua propter dictus suprascriptus Andreas testator constitutus in presentia et in conspectu mei j. pⁱ (johannis petri) notari infrascripti testamentum suprascriptum dissit asservit et confessus fuit et dicit asserit continere testamentum predictum de quo supra per eum predictum testatorem et manu dicti Ser Juliani de Ripa seu alterius cujusque notari rogantis se iterum atque iterum sepi sepijs sepiissime penituisse et penitere fecisse et condedisse testamentum de quo supra et omnia contenta in eo; propterea et omni meliori modo quo potuit testamentum predictum et omnia in eo contenta irritavit et revocavit cassavit et annullavit et irritat revocat cassat at annullat: et pro irritato casso revocato et annullato haberi voluit et vult in omnibus per eum omnia pariter et ac si per eum factum conditum et ordinatum non esset

Rogans etc

[*Archivio idem, Rogiti di Ser Giovanpiero Borghesi, Protocolli 1519-1524, segnato Notai B 2202 c. 537.*]

RUFUS G. MATHER.

ROME, ITALY.

SAPPHO AND THE "LEUCADIAN LEAP"

ONE of the most important archaeological discoveries of recent years is that of the so-called "underground basilica" just outside the Porta Maggiore in Rome. In April, 1917, a large room was found, fifty feet beneath the Naples railroad line, with nave and side aisles of exactly the form of an early Christian basilica. It dates from the first century A.D. and was evidently a pagan place of worship.

Sufficient details have already been published¹ to make us familiar with the more important features. The present article is an attempt to explain one of the stucco reliefs with which the walls are covered. The relief in question (Fig. 1) occupies the half-dome of the semi-circular apse. It is described by Fornari (*Not. Scav.* 1918, pp. 41 ff.) but by way of explanation he merely suggests that it might represent the voyage of the soul towards the Islands of the Blessed. Cumont (*R. Arch.* 1918, pp. 65 ff.) elaborates this theory more at length. It is quite possible, as he thinks, that the relief may have had some special cult significance to the votaries who frequented the place, but it appears probable that the original intention of the artist was to represent a well-known story, namely the famous "Leucadian Leap" of Sappho in her attempt to be freed from her hopeless love for Phaon.

Let us first examine the relief in detail. On the right (Fig. 1) is a rocky cliff from the top of which steps out into space a female figure. She wears a closely fitting garment, and holds in addition in her upraised right hand one edge of a large mantle which covers the back of her head and swells out in fluttering folds. In her left hand she holds one handle of a lyre. Behind her on a higher eminence stands Eros and seems gently to assist her to make the leap. Beneath is the sea, represented realistically with agitated waves. Half emerging from the water is a Triton with

¹ *Chron. B. A.* IV, 1917, p. 41; *London Times, Lit. Suppl.* Nov. 15, 1917, p. 555 (Mrs. Strong); *Year's Work in Class. Studies*, 1917, pp. 6 ff. (Van Buren); *Not. Scav.* 1918, pp. 30 ff. (Gatti and Fornari); *R. Arch.* 1918, pp. 52 ff. (Cumont); *A.J.A.* XXII, 1918, p. 79, XXIII, 1919, pp. 82, 429.

scaly body holding in his outstretched arms a large garment, as if to break the fall. To the left amidst the waves another Triton with legs terminating in serpent coils holds in one hand an oar and in the other a trumpet on which he blows. On a rock between the two Tritons may have been some other object, but it cannot now be distinguished: High up on the left is another cliff on which stands Apollo, apparently nude, holding his bow in his lowered left hand, and some object, possibly a torch, in his extended right. On a lower level to the extreme left sits a man with the upper part of his body wrapped in a short cloak. He leans forward and rests his head pensively, or regretfully, or sadly, as the case may be, on one upraised hand.

An explanation which fits nearly every detail of this scene is found in Ovid's XVth *Heroid*, the letter from Sappho to Phaon.¹ Commencing at line 157, Sappho tells how she was reposing sadly beside a spring and was addressed by a Naiad as follows: (vs. 163 text of Palmer)

- ‘*quoniam non ignibus aequis*
Ureris, Ambracia est terra petenda tibi.
- 165 *Phoebus ab excelso, quantum patet, aspicit aequor*
 —*Actiacum populi Leucadiumque vocant:—*
Hinc se Deucalion Pyrrhae succensus amore
 Misit et inlaeso corpore pressit aquas;
Nec mora, versus amor fugit lentissima mersi
- 170 *Pectora; Deucalion igne levatus erat.*
Hanc legem locus ille tenet. pete protinus altam
 Leucada nec saxo desiluisse time!
Ut monuit, cum voce abiit; ego territa surgo,
 Nec lacrimas oculi continuere mei.
- 175 *Ibimus, o nympe, monstrataque saxa petemus:*
 Sit procul insano victus amore timor!
Quidquid erit, melius quam nunc erit: aura, subito:
 Et mea non magnum corpora pondus habent.
Tu quoque, mollis Amor, pennas suppone cadenti,
- 180 *Ne sim Leucadiae mortua crimen aquae!*
Inde chelyn Phoebos, communia munera, ponam,
 Et sub ea versus unus et alter erunt;

¹ All of the more recent writers concur in considering this epistle to be really by Ovid in spite of the fact that it does not occur in all of the manuscripts. See Palmer and Purser, *Ovidi Heroides* (Oxford 1898), pp. 420 ff.; von Wilamowitz-Moellendorff, *Sappho und Simonides* (Berlin, 1913), p. 21, note 2.



FIGURE 1.—STUCCO RELIEF IN THE "UNDERGROUND BASILICA": ROME.

*'Grata lyram posui tibi, Pheobe, poetria Sappho:
Convenit illa mihi, convenit illa tibi!'*

With this passage in mind no further description of the relief is needed. The woman stepping from the cliff is Sappho, rep-

resented here as elsewhere¹ as holding her poet's lyre. Eros stands at her side to lend his support, and Apollo, to whom the lyre is to be dedicated, stands on the opposite height and stretches out his hand protectingly. Another kindly divinity is also introduced, the Triton holding out the robe to break the fall. To make the story complete, even an absent character is included and we see the figure of the unresponsive Phaon seated pensively at one side. Many of these details are not clear in the photograph. When one studies the original the impression of an actual leap into space is even more marked, and it seems certain that such was the intention the artist wished to convey.

For the purpose of explaining the relief there is no need to go into the question of the historical and much maligned Sappho. Doubtless those who have extolled her virtues in recent years² are quite right in their statements. At the time of Ovid, however, the story as given above was in vogue, in fact it was common property among writers for several centuries before his time. Strabo³ is our authority for the fact that Menander followed the same tradition, in fact he states that according to Menander, Sappho was the first to take the leap. Turpilus in his *Leucadia* probably followed closely the story as told by Menander, although the few remaining fragments⁴ reveal only faintly the background of the myth as given by Ovid. The original source for these writers was a story which was treated both in Alexandrian literature and in the New Comedy. For our purpose it is enough to know that at the time when the relief was executed the story of Sappho, as given by Ovid, was well known.

For our purpose also it is not necessary to seek out the history of the famous "Leucadian Leap." The Leucadian Cliff is a steep limestone rock situated on the end of Cape Doukato, a promontory five miles long at the south-west end of the island of Leucas. Here still remain traces of a once important temple of Apollo,

¹ Comparetti, 'Saffo nelle antiche rappresentanze vascolari,' *Museo Italiano di Ant. Class.* II, 1888, pp. 40 ff.

² H. T. Wharton, *Sappho* (London-Chicago 1908); von Wilamowitz-Moellendorf, *Sappho und Simonides* (Berlin 1913); William K. Prentice, *Class. Phil.* 1918, pp. 347 ff.

³ Strabo, X, ii, 9; Kock, *Comicorum Atticorum Fragmenta*, III, p. 89.

⁴ Ribbeck, *Comicorum Romanorum Fragmenta*, 2nd ed., pp. 97 ff. In one fragment of Turpilus (Ribbeck, p. 100) there is a reference to Neptune as well as Apollo. Had we the entire comedy before us it might be possible to trace through this a reason for the presence of the Tritons in the relief.

and here in early times was performed¹ an expiatory rite in honor of the god in which a criminal was covered with feathers in an attempt to break his fall, and was then thrown from the cliff. In the course of time arose the superstition that if anyone tormented by love should hurl himself from the cliff, he would find relief from his woes without necessarily losing his life in the adventure. This belief may have been derived in some way from the earlier religious rite, or it may have been an independent superstition, but at any rate at the time of the execution of our relief it was commonly accepted, and may well have furnished a subject for an artist of the time.²

In early art, representations of either Sappho or Phaon are rare and generally limited to isolated figures of one or the other.³ Nothing to parallel the present scene has been found, a fact which furnishes additional proof that the story as here depicted is a late development.

An additional confirmation of our interpretation of the relief is found on a coin of Trajan from Nicopolis, published first by Friedländer.⁴ As pointed out later by Imhoof-Blumer⁵ the representation of the coin on plate 23 of Friedländer's publication is inaccurate. What one really finds is a figure of Apollo standing erect in exactly the attitude of the "basilica" relief, with the right hand outstretched holding a torch, and with the left hand at his side holding the bow. Of still more importance is the inscription: 'Απόλλων Λευκάτης. Both the coin and the relief evidently have reference to the cult statue of Apollo in the temple on the cliff of Leucas, and the localizing of the scene represented on the relief leaves no doubt concerning the subject to which it refers.

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¹ See Frazer, *The Scapegoat* (London 1913), p. 254; A. B. Cook, *Zeus*, I, pp. 344 ff.

² Hephaestion (Ptol. *Hephaest. ap. Phot. Bibl. cod.* 190, p. 153, ed. Im. Bekker) gives a list of some who took the leap but does not include the name of Sappho. Margaret Heinemann (*Landschaftliche Elemente in der griech. Kunst*, pp. 48 f.) thinks a painting in the *Tomba della caccia e pesca* at Corneto (*Mon. Inst.* XII, pl. 14 a; Dennis, I, p. 311) a representation of this leap. Dennis (*loc. cit.*) and von Wilamowitz (*Sappho und Simonides*, p. 26, note 1) describe the painting correctly as a simple representation of bathing and diving.

³ Comparetti, *op. cit.*; Roscher, *Lex. s. v.* 'Phaon.'

⁴ *Arch. Zeit.* 1869, p. 103, pl. 23, No. 21.

⁵ Imhoof-Blumer, *Monnaies Grecques*, p. 141.

THE MEDIAEVAL HISTORY OF THE DOUBLE-AXE MOTIF

THE double-headed axe is so ancient and well known a motif in ornament that it scarcely requires description or explanation in its original form. About the beginning of the Christian era, however, it begins to take on elaborated forms which gradually evolve a pattern whose further evolution can be traced uninterruptedly into the thirteenth century. This evolution it is the purpose of my paper to trace.

I. MOSAICS

It is quite apparent, from the advanced form of the double-axe in our first example (Fig. 1), a mosaic of Salzburg of the early first century A.D., that the motif has a long history behind it, leading back perhaps to lotiform patterns in Egyptian ornament, which it is not in the province of this paper to trace. The significant feature of the Salzburg mosaic, in view of the later development of the double-axe, is the isolation of the motif, but we also note that the concave sides of the axe are filled with design, so that they give the effect of half-axes placed in a perpendicular sense to the principal double-axe head.

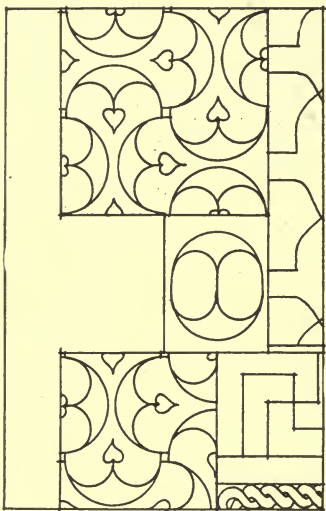
This handling of course suggests an all-over pattern, and we have in fact such an application of the motif in a beautiful mosaic pavement in the Baths on the Cladeos at Olympia (Fig. 1), dating in the time of Nero. It may be noted that the small arrow-like points which were used in the Salzburg mosaic are lacking in the Olympia example.

The greater flexibility of the pattern thus afforded by the complementary treatment of the concave sides is also shown by an example of the second century found in a mosaic of the Baths of Pompeianus at Oued-Athmenia in Numidia.¹ The isolated motif of Salzburg is now strung out in a continuous border which is capable of turning the numerous corners required by the design

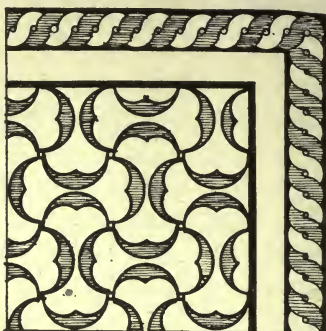
¹ Daremberg and Saglio, *Dict. des Ant. grecques et romaines*, VI, fig. 5246.



MOSAIC FROM SALZBURG



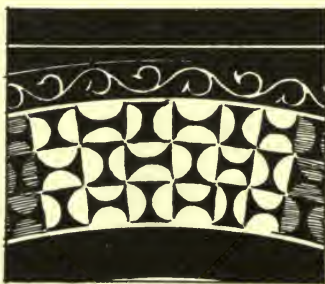
MOSAIC FROM RUSGUNÆ



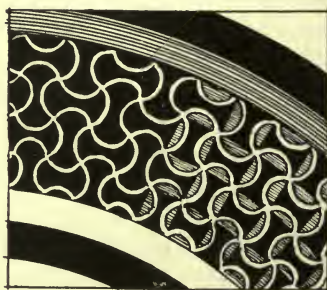
MOSAIC FROM BATHS ON THE KLADEOS



GOSPEL OF GODESSCALC



GOSPEL OF CHARLEMAGNE



SOISSONS GOSPEL.

FIGURE 1.—THE DOUBLE-AXE ORNAMENT IN MOSAICS AND ILLUMINATIONS.

by reason of the perpendicular axis already established in the decoration of the concave faces. The all-over pattern of Olympia, again, reappears in a third-century Roman mosaic at Puig

de Cebolla in Spain,¹ but here the decline of naturalistic ornament is striking, for the motif is handled in a hard and geometric manner, and all understanding of the original form is lost. It is only by comparison with the example from Olympia that we can discover the connection of the Spanish pattern with the original double-axe.

There has been found in Africa, at ancient Rusguniae near Algiers, a well-preserved mosaic, dated through epigraphical peculiarities about 400 A.D., which again affords a fine example of our motif (Fig.

1). The double-axe is here used in a border that varies slightly in width, but the facility of the handling gives one an impression of consistency in spite of this, as well as a feeling that the mosaicists were beginning to canvass the possibility of laying out the design in squares in order to simplify its execution. Proof of this is afforded directly by an important example



FIGURE 2.—MOSAIC AT SORDE.

at Sorde in the southwestern corner of France (Fig. 2). The design of this mosaic is in fact laid out in squares which govern the application of the pattern; the motif carries with it the souvenir of its early form in the arrow-points or tiny ivy-leaves which decorated the lateral concavities in our first example at Salzburg, but their meaning has now been lost in a mere space-filling design. The mosaic aroused some discussion at the French *Congrès Archéo-*

¹ L. Puig y Cadafalch, *L'Arquitectura romànica a Catalunya*, I, fig. 285.

logique of 1888, and produced a division of opinion, some maintaining that the pavement was Gallo-Roman while others assigned it to the twelfth century. The earlier date is indicated with certainty by the appearance of the arrow-points or leaves which in the later history of the motif are reduced to mere dots, usually three in number, and the question has recently been decided in favor of the Gallo-Roman date by the discovery of substantially the same pattern as that of the Sorde mosaic in a fourth century pavement of St. Sophia at Sofia in Bulgaria.¹

These examples by no means exhaust the list of specimens found in Roman art, early and late, but the others² all show the original isolation of the motif and are thus not related to the development of the motif which started with its use as an all-over pattern. Like most of the threads that bind antiquity to the Middle Ages, this one also is interrupted by the "dark ages," and we find that the history of the motif in recognizable form must be resumed in the Carolingian period. But one monument shows that the pattern was not forgotten even in that barest of centuries as regards artistic creation,—the seventh. In the pediment of the ancient structure which now forms the transepts of the Baptistery of Saint-Jean at Poitiers³ we find the double-axe used as a frieze, placed there in the reconstruction of the seventh century when the walls of the baptistery were raised. The peculiarity of this example resides in the fact that the squares which we saw at Sorde are here all turned in the same sense, so that we really lose the last connection with the original double-axe of the isolated variety; the Merovingian decorator did not understand the origin of the pattern and made merely a geometrical copy of the lateral half-axes. The connection with Gallo-Roman examples like that of Sorde is indicated by the carefully cut notches which correspond to the concavities of the under side of the axe-heads in the mosaic.

II. ILLUMINATED MANUSCRIPTS

We resume the tracing of the history of our pattern at the end of the eighth century with its use in the Gospels of Godescalc, and

¹ *Jb. Arch.* I. 1912, p. 562, fig. 3.

² *Baudenkmäler von Olympia*, II, pl. CX; *Antike Denkmäler*, I, pl. 47; *L'Arquitectura romànica a Catalunya*, I, figs. 281, 286, 342; Riegl, *Spätrömische Kunstindustrie*, pl. XV, 6.

³ De la Mauvinière, *Poitiers et Angoulême*, p. 12.

it is a noteworthy fact that for the next three centuries it seems to be found in manuscripts alone. The ivory-workers never use it, and no examples may be found in gold-work, nor in the scanty remains of architectural ornament which have been left us by the Carolingian and Ottonian epochs. But starting with the use of the motif by Godescalc we enter upon an evolution that is continuous and consistent in the decoration of manuscripts until the motif emerges in the architectural sculpture of the Romanesque schools.

The Gospels written by Godescalc (Paris, Bibliothèque Nationale, *nouv. acq. lat.* 1203) are dated by Leprieur¹ shortly after 781. The manuscript is the earliest one of certain date which can be assigned to what is called the "Ada-group," the name being derived from a putative sister of Charlemagne for whom one of the manuscripts in the group was written and illuminated. Godescalc knew our motif and uses it (Fig. 1) in a way much more reminiscent of the late mosaics than is the frieze of Saint-Jean-de-Poitiers. The notches which the Merovingian decorator employed are lacking and their place is taken by shading. But the squares are turned, as in the mosaic of Sorde, in two senses and the arrow-points or ivy-leaves of the original design are indicated by three small dots. These dots are a persistent characteristic of the motif in illumination, continuing, with variation in number, down to the twelfth century.

The next example to be found in the Ada-group occurs in the Psalter of Charlemagne² which Leprieur dates between 772 and 795. The motif is here much the same as in the Godescalc Gospels, but the axe-heads are outlined with a light contour which gives to the design a flowing continuity akin to that of the Olympia mosaic and absent in the pattern used by Godescalc, which is too emphatically squared. Another example is found in the Gospels of Saint-Denis of the same group,³ a manuscript which is to be dated at the end of the eighth century according to Leprieur and Boinet, but is a work of somewhat cruder execution than either of the two preceding works. This inferiority is also displayed in the use of the double-axe ornament, which, though it retains the light contour of Charlemagne's Psalter, shows such hopeless disconnection as to lose all effect of a flowing pattern.

¹ In Michel, *Hist. de l'Art chrét.* I, 1, p. 337.

² Vienna, Imperial Library, 1861; Boinet, *La Miniature carolingienne*, pl. VI.

³ Paris, Bibl. Nat., *MSS. lat.* 9387; Boinet, *op. cit.* pl. V.

In the Gospels of Charlemagne (an Ada-group manuscript in the library at Abbeville), dated by Leprieur¹ and Boinet between 790 and 814, we have for the first time in illumination the use of the motif as a veritable all-over pattern (Fig. 1). From now on it would be more closely descriptive to call the motif the "pin-wheel,"—a name which has for some time been given to the ornament by students of illumination at Princeton,—because it is so handled that from any intersection-point of the design four axe-heads radiate in pin-wheel fashion. The sense of squareness is beginning to be lost in the flow of a continuous pattern.

The continuous handling is even more apparent in the Gospels of Soissons (Ada-group, Paris, Bibl. Nat., *MSS. lat.* 8850), dated by Leprieur and Boinet about 820 (Fig. 1). Here not only the outline of the axe-heads serves to accentuate the flow of the pattern by their continuous treatment, but the axe-heads themselves are made so slender as to give the impression of ribbons. The Gospels of Lorsch,² on the other hand, are an excellent illustration of the "throw-backs" which the student so often finds in illumination because of the frequent wholesale copying, on the part of a later scribe, of the decoration as well as the text of the earlier manuscript which serves him as model. This manuscript of the middle of the ninth century gives us two examples of the "pin-wheel," one in the inner border of the "Christ in Majesty" and the other in that of the title-page of Matthew. The outside borders of both pages are identical with that of the Matthew-portrait in the Gospels of Soissons, and it is not surprising therefore to find a striking similarity between the "pin-wheel" in the inner border of the "Majesty" and that used in the border of the Matthew-portrait of the Soissons Gospels. On the other hand, the "pin-wheels" of the Matthew title-page in the Lorsch Gospels resemble more closely the motif as we have it in the Psalter of Charlemagne, cited above, and other characteristics of the page show a similar affinity. The Gospels of Lorsch in this, as in many other respects, appear rather as an eclectic summary of the style of the Ada-group of manuscripts than as a step forward in the evolution of our motif.

¹ In Michel: *Hist. de l'Art chrét.*, I, 1, p. 337.

² Gyulafehérvár in Hungary, Batthyány library; Boinet, *op. cit.* pls. XV, XVI. Another "Ada" example of the motif, so poorly reproduced (Dob-schütz, *Textkritik der Vulgata*) that I hesitate to classify it, is to be found in the *Codex Ingolstadiensis* (Munich, Bibl. Acad. MS. 29).

Midway between these two types found in the Gospels of Lorsch is an example provided by the Gospels of Bishop Anno of Friesing in South Bavaria (854–875). The double-axe is here (Fig. 3) used for the first time in an all-around border. It is handled with considerable facility for, in spite of turning corners and perhaps the greater difficulty of being confined to two rows of double-axes instead of three, the continuity of the design is pretty well maintained, chiefly through the accentuated outline. It is instructive to compare this example with that of the Passau Gospels, three centuries later (Fig. 5).

Our next example is of value as showing how the motif may serve to indicate the date of a manuscript. It is taken from the Psalter of Corbie,¹ a manuscript dated by Boinet in the early ninth century. This date would appear strange to any student of illumination in view of the high development reached by the figured initial, and certainly it would not be suggested by the form of the "pin-wheel" here used. The handling is crude, but shows two characteristics which point to a date at least a century later than that given the manuscript by Boinet. The first consists of the considerable margin which is allowed to separate the tips of the axe-heads, as is the case only in late examples. In the second place the white contour which we have seen in several earlier examples is here produced by drawn lines; in other words the color handling is giving way to a linear technique which, as we shall see, is a sign of decadence.



FIGURE 3.—ILLUMINATION FROM THE GOSPELS OF ANNO OF FREISING.

From the Ada-group, the "pin-wheel" passes on to the Rhenish school of the Ottonian period which is nowadays somewhat loosely called the "school of Reichenau." A fine example is found in an early manuscript of the school, the Heidelberg Sacra-

¹ Amiens, Bibl. de la Ville, 18; Boinet, *op. cit.* pl. CXLVIII.

mentary (Heidelberg, University Library, Sal. IXb), dated by Janitschek and by Herbert toward the end of the tenth century. The symptom of decadence noted above in the separation of the points of the axe-heads is here apparent (Fig. 4), but the development of the motif is shown in its freer use as an all-over pattern, in which respect it affords the best example to be found in illumination. Rhenish influence on Belgian work is shown by the close affinity between the form of the pin-wheel in the Sacramentary



FIGURE 4.—MINIATURE FROM THE HEIDELBERG SACRAMENTARY.

and in a Belgian manuscript in the Bibliothèque Nationale.¹ The only difference between the two designs lies in the somewhat greater distance left between the tips of the axes, and in the use of but one dot instead of the usual three as a space-filler.

A Rhenish manuscript dated by Vöge about the year 1000, the Aachen "Otto-manuscript,"²

affords evidence of the decline which is fast coming upon our motif in illumination. In one of the canon-pages we see the tendency to thin the axe-heads to a point at which they almost become ribbons, and all the examples of the use of the "pin-wheel" in this manuscript show a pronounced emphasis given to the longitudinal axis. This in time leads to the deterioration of the motif from an all-over pattern to what is practically a series of parallels. This last phase is represented by the

¹ The Sacramentary of Paris, Bibl. Nat., MSS. lat. 819; photograph in Princeton Art Museum.

² Beissel: *Die Bilder der Handschrift des Kaisers Otto*, pls. I, XX, XXV, XXVI.

border of the Luke-portrait in the Passau Gospels (Fig. 5) in Munich, dated by Swarzenski about 1150.¹ The example should be compared with the "pin-wheel" of the Gospels of Anno of Freising noted above (Fig. 3). The use of the motif is identical and it is altogether probable that the later manuscript borrowed its border, if not directly from the Bavarian manuscript, at least



FIGURE 5.—ILLUMINATION FROM THE PASSAU GOSPELS: MUNICH.

from an intermediate copy. But the lapse of three centuries is reflected in the tell-tale lengthening of the major axis in the Passau Gospels, a lengthening which has been carried to such an

¹The motif occurs in a dated Hildesheim manuscript of 1011 (Domschatz, No. 33), where the beginning of the isolated treatment of the Passau manuscript is indicated by a breaking down of the all-over pattern and the introduction of a sort of rectangular cabochon in alternate squares. The edges of the axe-heads are but slightly separated, which shows an earlier stage than the example in the Passau gospel. See Josten, *Neue Studien zur Evangelienhandschrift no. 18 im Domschatze zu Hildesheim*, pl. V, A.

extent that turning the corners becomes a difficult task for the illuminator.

The Passau manuscript represents the continuation of the old Reichenau school in German illumination, and thus by right inherits the use of the "pin-wheel" from the older group. Other German manuscripts of the twelfth century also offer examples of



FIGURE 6.—ILLUMINATION IN A MANUSCRIPT OF THE XII CENTURY: TRÈVES.

it, notably one in the treasury of Trèves cathedral (Fig. 6), where we find the motif reduced to a single line of double-axes, as we might expect from the parallelizing tendency above noted. This specimen may be said to close the cycle we have followed, beginning with the Salzburg mosaic of the first century and ending thus in the Romanesque illumination of Germany in the

twelfth. The pattern occurs again in the Perikopenbuch of St. Erentrud at Munich (c. 1150),¹ but in so degenerate a form that the double-axe motif may be said to have vanished.

Two examples of the use of the motif in wall-painting may be briefly cited here. One is probably of the early twelfth century; it is to be found in Catalunya, in the church of Sta. Maria de Bohí.² The pattern here is distinctly squared, and there is no particular scheme to the coloring; the lack of the contour, which was a prevalent characteristic of the motif in illumination, links this Spanish example more closely with the architectural type to be considered shortly than with the manuscripts.

This is less true of the other fresco, at Knechtsteden on the Rhine.³ The motif appears both on the soffit of the triumphal arch of the local church, and in a border at the base of the drum of the apse. The pattern in the former case is a very stiff and geometric rendering of the all-over pattern with the outlined contour common to the examples we have found in the manuscripts. The border of the design in the apse is a very late and decadent form, closely resembling the motif in the Perikopenbuch of St. Erentrud. The church is dated in the twelfth century.

III. ARCHITECTURAL SCULPTURE

A. IN ITALY

The double-axe or "pin-wheel" appears in architectural sculpture in Italy as early as the opening years of the twelfth century, some years before it makes its appearance in France. Guglielmus, so far as we know, was the first sculptor to use the motif, and it appears five times in Modena cathedral on which Guglielmus was working *ca.* 1100. In one of these cases it is used as a torus moulding, a most natural translation into stone of painted borders such as we find in the Heidelberg Sacramentary. This torus is one of the archivolt mouldings of the central western portal of the cathedral,⁴ and the motif is so well handled in this example that one wonders if Guglielmus, or his assistant, did not draw from some earlier sculptured example. The other four specimens at Modena are unique in that the motif is used in each

¹ Swarzenski: *Salzburger Malerei*, pls. L, LVIII.

² *Pintures Murals Catalanes*, publ. by the Institut d'Estudis Catalans, III, pl. XVII.

³ Clemen: *Kunstdenkmäler der Rheinprovinz*, III, 3, figs. 24, 25, and pl. 1.

⁴ Martin: *L'Art roman en Italie*, I, pl. 46, 3.

case to represent water. On the lintel of the right portal of the west façade (Fig. 7) we find a representation of Noah, sailing along in the Ark upon a flood of double-axes. It must be admitted that the rendition of the water is not so bad as one might expect, owing to the Italian method of carving the motif, which differs greatly from that used in France. The French carver made the axe-head into a flap (Fig. 11), while the Italians obtained a peculiar effect by raising the cutting edge of the axe,



FIGURE 7.—RELIEF OF NOAH BY NICOLÒ:
CATHEDRAL, MODENA.

so to speak, in relief, and by incising the thinner necking, so that each double-axe appears to be pushed inward at its centre. The companion piece to the relief just mentioned, viz., the lintel of the left doorway, presents among other scenes the Creation of Eve.¹ Adam is here depicted asleep beside a pool whose water is again indicated by the double-axe pattern. The other two scenes in which this use of the motif appears occur on the lintel of the south

doorway and on the archivolt of the north portal.² In the latter case the sculptor apparently became confused in his rendition of the design, and the double-axe drifts off into another pattern.

San Silvestro at Nonantola, erected a few years after Modena and close to it in style, displays the motif on one of the archivolt mouldings of the western portal.³ In the cathedrals of Ferrara and Piacenza, the sculptures in which the double-axe appears are

¹ Martin, *op. cit.* pl. 45, 3.

² Martin, *op. cit.* pl. 47, 2, 1.

³ Porter, *Lombard Architecture*, pl. 155, 5.

supposed to be by Guglielmus' pupil Nicolò, and certainly all these cathedrals show a close community of style. At Ferrara, built about 1135, we have two portals with torus mouldings carved with our motif, namely the central portal, and the southern portal of the west façade.¹ The use of the double-axe in the latter case is remarkable in that the blades are further decorated with a bold though simple floral design. Piacenza has the usual sculptured torus over the right portal,² and the double-axe here, as in the other Italian examples throughout two centuries, shows an extraordinary adherence to the first form of the motif as used by Guglielmus.

In the basilica of Pomposa we find a double-axe capital among several bits of sculpture bearing the characteristics of the school of Antellami. The similarity of all the Italian examples of the motif makes it difficult to date this capital with accuracy, but a date about 1170 would fit the group of sculptures to which it belongs and would not be improbable for the capital itself.³ The basilica church of Traù in Dalmatia⁴ affords another example of the motif in a pilaster capital behind the pulpit. It requires no special notice, exhibiting as it does the usual features of the motif as used in Italy. A more interesting example is to be found in the ambo of the church of Sta. Maria in Carpi (Fig. 8), which is dated by Porter in 1184. The figure of a dead saint is here represented in rather low relief upon a background of double axes done in the usual Italian way.



FIGURE 8.—PROPHET IN THE SAGRA:
CARPI.

¹ Martin, *op. cit.* pls. 71, 74.

² Martin, *op. cit.* pl. 31.

³ Errard, *L'Art byzantin*, III, pl. XI.

⁴ Kowalczyk, *Denkmäler der Kunst in Dalmatien*, pl. 105.

Still another example of the motif in Italy may be mentioned, namely the transenna found at S. Agnese at Rome¹ which is decorated with an all-over double-axe pattern. Venturi and Jubarù both date the balustrade in the fourth century, but analysis of the archaeological evidence which induced Armellini, the first to publish the transenna, to assign it to this early



FIGURE 9.—MAP SHOWING THE DISTRIBUTION OF THE DOUBLE-AXE MOTIF.

period, shows that his conclusion was based on the slenderest of data. In view of what appears to me to be a very uncertain date, I have not tried to give this example its place in the evolution of the motif.

B. IN FRANCE

Our examples in France are much more diversified than those of Italy, where we have noted a facility and understanding in the

¹ Jubarù, *Sainte-Agnès*, p. 320, fig. 35.

early handling of the motif which suggests antecedents that we have lost, however certain it may be that the ultimate source from which Guglielmus drew the design was the illumination of manuscripts. This very skill of the early work inhibited any marked advance in the case of the Italian use of the double-axe. In France on the other hand the examples differ widely and it is difficult to trace a development, although it will be noticed (see map, Fig. 9) that the majority of the monuments which show the motif are to be found in the valley of the Loire. The order in which they are here presented is an arbitrary one which parallels the evolution already traced in the case of the illuminated manuscripts, but it will be found that this sequence does not conflict with such dates as can be determined with certainty.

At Aix, a colonnette in the cloister of the cathedral is covered with the "pin-wheel" design (Fig. 10). The carving is crude, with a tendency toward lop-sidedness at the top of the colonnette. The spaces between the flaps which distinguish French from Italian "pin-wheels" are here filled with many dots, a characteristic reminiscent of the manuscripts and not found in Italy.

The primitive character of the work, and the fact that only one colonnette is thus decorated indicate that this was an experiment which apparently was not regarded as successful. The crudity of the design accords with the date at the end of the

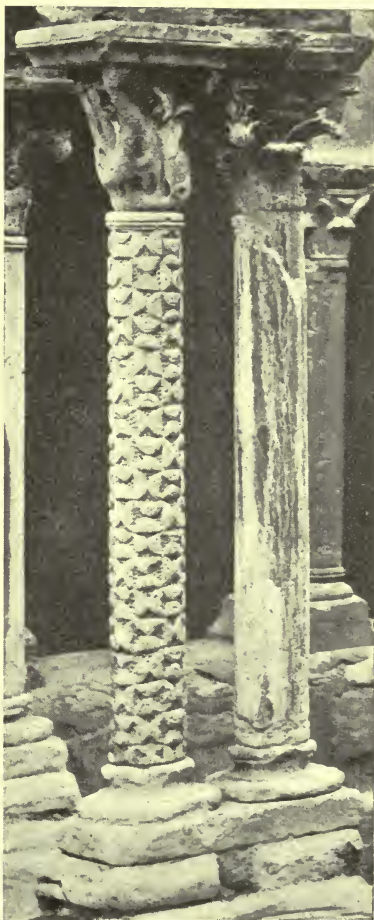


FIGURE 10.—COLUMN FROM THE CATHEDRAL CLOISTERS: AIX.

eleventh century which Revoil¹ and Lasteyrie² imply for the building of the cloister.

At Donzy, in the church of Notre-Dame-du-Pré, we find a torus of the archivolt of the west portal bearing a very good rendition of the "pin-wheel" motif.³ So great is the advance over the example of Aix that we should be inclined to date this example fully half a century later. The design is rendered in a splendid all-over pattern, with the lips of the flaps practically meeting. The dots in this instance are three in number.

The church of Saint-Martin-le-Beau⁴ has an archivolt moulding similar in most respects to that at Donzy. The two points of difference are that at Saint-Martin-le-Beau there are only single dots, and the flaps of the "pin-wheels" are decorated with a series of gouged concentric arcs which increase the flow of the design, approaching the ribbon handling which we have noted in the later manuscripts, and which reappears in its highest development at Saint-Gilles.

On the south portal of Bourges (Fig. 11) we find an example that looks like a developed Aix "pin-wheel." The lips do not meet and there are no dots, but otherwise there is great similarity between the two designs. There is also a small colonnette by the south door of Bourges containing the pattern, but this is rather more in the style of Donzy in omitting the several lines on the flaps. The sculptures of the south portal at Bourges are dated about 1160. At Paray⁵ there is an example much like that of Bourges, but the lips of the flaps are slightly further apart.

Somewhat earlier than the south portal of Bourges is the corresponding door of Le Mans.⁶ Here a colonnette shows the design in a form like that of the archivolt of Saint-Martin-le-Beau, with single dots, but with the lips slightly further apart. The "pin-wheel" effect is very strong in this example because of the thinning of the flaps and the accentuation of the points of intersection. This attenuation of the flaps is found in even greater degree at Chartres in the central portal of the west façade.⁷ The

¹ Revoil, *Arch. du Midi de la France*, II, p. 5.

² Lasteyrie, *L'Architecture religieuse en France à l'époque romane*, p. 411.

³ Lasteyrie, *op. cit.* p. 581.

⁴ Photograph, Princeton Art Museum; Baum, *Romanesque Architecture in France*, p. 142.

⁵ Dehio and Bezold, *Kirchliche Baukunst des Abendlandes*, III, pl. 299, 4.

⁶ Photograph, Princeton Art Museum.

⁷ Photograph, Princeton Art Museum.

single dots that here occur are done in relief instead of with the usual incision. A combination of the styles found at Chartres and at Donzy is seen in the small church at Semur-en-Brionnais.¹

Another example, with no features of especial note, is to be found in Notre-Dame at Issoudun.²

At Rétaud,³ which is dated *ca.* 1170, we find that the thinning of the flaps has advanced to such a point that even the "pin-wheel" seems to vanish, and the design, especially when seen from some distance, looks more like a network of fluttering ribbons. The most ribbon-like of all our examples is on a fascia moulding that runs along the paratid just south of the central portal on the west façade of Saint-Gilles.⁴ There is strong resemblance between the sculptured work here and

¹ Lasteyrie, *op. cit.* p. 588.

² *Congrès Archéologique de France*, 1873, p. 686.

³ Photograph, Princeton Art Museum. For the date, see Dangibeaud, *Bull. Arch.* 1910, p. 45.

⁴ Photograph, Princeton Art Museum.

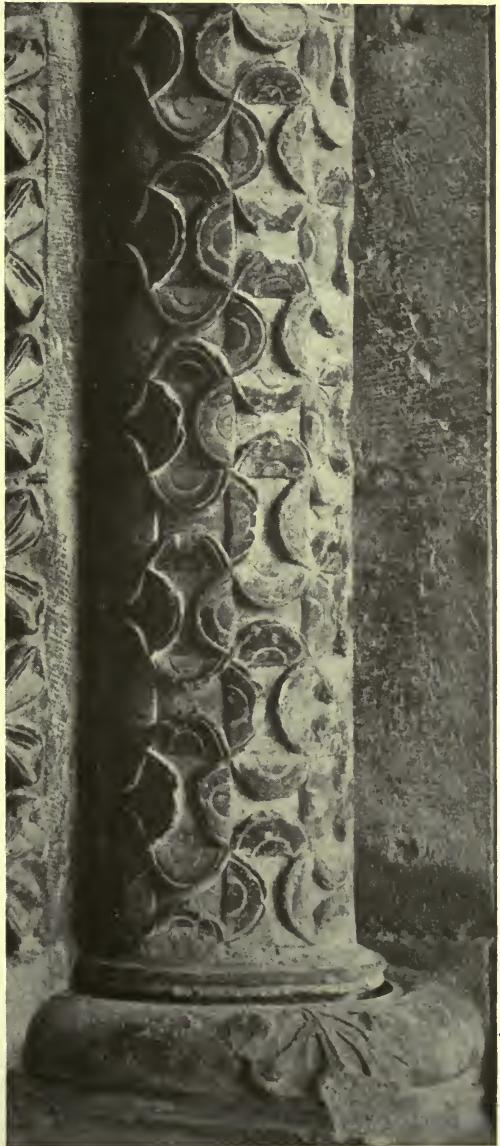


FIGURE 11.—COLUMN OF NORTH PORTAL: BOURGES.

the "pin-wheel" decoration of the Aachen Otto-manuscript. It is an interesting coincidence that this ribbon-like style should be found at Saint-Gilles, one of the latest of the French Romanesque examples in sculpture (dating from 1179 according to Lasteyrie), while the ribbon treatment of the Aachen manuscript affords us our last example of the all-over pattern among the manuscripts. After these two, the accentuation of the longitudinal axis leads in both cases to the reversion of the design toward a single row of double-axes. This was found to be true in the Trèves manu-



FIGURE 12.—NORTH PORTAL OF CHURCH: ARDENES.

script (Fig. 6), and we find it true again in our next French example in stone, on the archivolt of the north side door of the church at Ardenes (Fig. 12), which curiously enough strongly resembles the Trèves manuscript in the style of its double-axe design.

The little church of Saint-Gilles at Ile-Bouchard has unfinished double-axes on the archivolt of the north side door, but they were undoubtedly meant to be completed like those on the caps of the choir pilasters of the church of Saint-Lazare in the same town.¹ The finished examples are real double-axes which no longer have the flaps peculiar to nearly all the French work.

¹ Photograph, Princeton Art Museum.

There remain to be mentioned four further examples of the double-axe or "pin-wheel" in the architectural sculpture of France. The first is found upon a pilaster cap to the south of the main portal of the church of Chef-Boutonne, which is decorated with a series of the flapped double-axes set parallel instead of end-to-end, and separated by vertical beads.¹ It is the only instance that I have found of this peculiar use of the motif. At Esnandes,² the lower wall of a blind arcade is covered with an all-over double-axe pattern. The work must be late, however, in view of the use of the pointed arch, and as it is done in the Italian rather than the French technique, it may well be assigned to some sculptor of the thirteenth century, either Italian, or a native acquainted with Italian methods and designs. A similar example seems to be found in the decoration of a pilaster in the choir of the church at Thor.³ Judging from the drawing of the design which is the only reproduction available, the characteristic French flaps are omitted.

Our last example in France of the sculptured "pin-wheel" is found upon the stole of one of the figures which occupy the embrasures of the side doors of the south portal of Chartres, and are dated in the middle of the thirteenth century.⁴ This example shows again the carefully squared design which we associate with the Carolingian phase of the motif, which may indicate that the realism with which the designs on the vestments of these figures are executed is due to the imitation of actual vestments of an earlier period. But the delicate leaves which here decorate the the axe-heads are reminiscent of those found at Ferrara.

The motif passed from the architectural sculpture of the Loire basin into the wall-painting of the same region. The priority of the sculptors may be seen from the greater variety which they impart to the motif, while the fresco-painters of the twelfth century use but one form, imitated from such examples as that of Bourges (Fig. 11), in which the flaps are decorated with concentric arcs. The earliest example of the French use of the motif in fresco may be that offered by Saint-Savin in Poitou, but here again the "pin-wheel" seems to be the deciding argument in a question of date. Merimée⁵ left open the date of the Romanesque

¹ Photograph, Princeton Art Museum.

² Photograph, Princeton Art Museum.

³ *Congrès Arch de France*, 1909, p. 287.

⁴ Didron, *Annales archéologiques*, VII, p. 150, no. 5.

⁵ *Peintures de l'Église de Saint-Savin*, p. 54.

frescoes of Saint-Savin, allowing a range from 1050 to 1150. E. Mâle¹ inclines to limit Merimée's date to the end of the eleventh century. Lasteyrie² does not believe them to be so ancient, and thinks that certain of the compositions belong to an "advanced epoch of the twelfth century." The appearance in the frescoes of the "pin-wheel" in the form used by the sculptors would indicate a date as late as the middle of the century. The other examples in frescoes of the twelfth century³ are all found in the Loire basin, save two toward the century's end in Burgundy and Savoy. The concentric arcs, which mark the derivation of the motif from the sculptured examples, disappear in the thirteenth century.

This completes the evolution of the double-axe motif in the Middle Ages. I have cited all the examples which I have been able to gather together and hope that the material thus presented may be useful to the student of Mediaeval Art. Other examples of the motif no doubt exist, but I think that if such turn up, they will hardly do more than modify very slightly the course of development as outlined. At any rate the study of the foregoing examples shows that throughout the Middle Ages the evolution of the motif was consistent and its extension circumscribed to an extent that can rarely be paralleled in the history of ornament.

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¹ In Michel, *Hist. de l'Art chrét.* I, 2, p. 758.

² *Op. cit.* p. 550.

³ French examples of the motif in wall-paintings:

1. Saint-Savin (Vienne); XII (?) century. Didot et Lafillée, *Peinture décorative en France*, ch. I, pl. I.
2. Montoire (Loire-et-Cher); XII century. *Op. cit.* pl. V, 7.
3. Poncé (Sarthe); XII century. *Op. cit.* ch. VI.
4. Saint-Desiré (Allier); XII century. *Op. cit.* ch. VIII, pl. VIII, 10.
5. Saint-Martin de Laval (Mayenne); XII century. *Op. cit.* ch. VIII.
6. Sainte-Chef (Isère); end of XII century. *Op. cit.* pl. IX, 1.
7. Saint-Philibert de Tournus (Saône et Loire); end of XII century. *Op. cit.* pl. XVII, 3.
8. Saint-Ours de Loches (Indre et Loire); XIII century. *Op. cit.* pl. XIX, 13.
9. Saint-Michel d'Aiguilhe, near Le Puy (Haute-Loire); XIII century. *Op. cit.* pl. XXIII, 5.
10. Chapel of Saint-Crépin, Evron (Mayenne); XIII century. *Op. cit.* pl. XXVI, 2, 3.
11. Autry (Ardennes); XIII-XIV century. *Op. cit.* pl. XXXVIII, 15.

NOTE.

Mr. O'Connor's paper is intentionally objective, and for this reason no doubt he has refrained from certain generalizations which are in some cases suggested, in others imposed, by the interesting evolution which he has traced: They are nevertheless of such interest to students of Mediaeval Art that I have taken the liberty of adding them in the form of this note.

The first point of a general nature that one notices in reviewing the history of the "pin-wheel" is the curiously limited area over which its evolution extends. Motifs of ornament seldom behave in so circumspect a fashion and the negative aspects of the extension of the motif are worth noting. Thus it appears in no school of Carolingian illumination except the earliest one,—the Ada-group,—and thereafter confines itself to the German schools which have already been suspected of drawing largely from the Ada-manuscripts. It also duly appears in Belgian work of the eleventh century, thus confirming the indications of Rhenish influence on Belgian illumination which may be gathered from other sources. It does *not* appear in the Franco-Saxon manuscripts, nor in their descendants of Northern France, nor in the English schools, which brings into sharper relief the separation in origin and development of the French and English schools of illumination from those of the Rhine.

Again, its appearance and extension in the architectural sculpture of France in the twelfth century is marked by a similar circumscription of area. Mr. O'Connor's map will make this clear to any student of the French Romanesque. No examples have been noted in Normandy or the Northern and Eastern provinces, nor in England, and the motif is similarly absent from Languedoc and Perigord. The extension of the ornament seems thus to have been confined, save for the few examples found in Provence, to the valley of the Loire, with excursions into the southern outposts of Ile-de-France, and into the northern ones of Saintonge and Poitou.

Aside from these negative indications, we may draw certain positive inferences from the evolution of the motif which are of even greater interest. In the first place, the late Roman history of the motif has shown that it was popular in mosaics. The squaring of the design which is characteristic of these late mosaics reappears when the motif occurs in the Ada-manuscripts, and the conclusion is imposed that the illuminators borrowed the motif

from the mosaics or similar late Roman sources, which conclusion should exert a qualifying effect on the tendency manifest of late years to ascribe the ornament of the Ada-group to Oriental sources *en bloc*.

Lastly, there is the curious unheralded emergence of the motif in Lombard sculpture. It could not have been borrowed from France because the Italians used it first and in a different form. The only school which was commonly using the motif in the eleventh century, the period immediately preceding its appearance in Guglielmus' work, was the Rhenish school of manuscript illumination deriving its style from the "school of Reichenau" of the Ottonian period, which in turn, as Mr. O'Connor has shown, borrowed the motif from the Carolingian Ada-manuscripts. Rhenish illumination is thus indicated as the source from which Guglielmus got his "pin-wheels," and this seems to me to be a very natural source, in view of the fact that there is a distinct affinity between the figure-style of the Rhenish manuscripts and that which Guglielmus developed into such crude power in the reliefs at Modena. The Rhenish manuscripts in fact are the *only* monuments of the period preceding the rise of the Lombard style that afford a reasonable source for the Lombard figures and at the same time include the tell-tale "pin-wheel" in their repertoire of ornament. It seems to me that Mr. O'Connor's paper goes far toward clearing up the mystery of the origin of the Lombard style; it would seem that in its connection with Germany we have simply another example of that close relation of Italy with the Rhine which is a commonplace of mediaeval history.

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ARCHAEOLOGICAL DISCUSSIONS¹

SUMMARIES OF ORIGINAL ARTICLES CHIEFLY IN CURRENT PUBLICATIONS

WILLIAM N. BATES, *Editor*

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GENERAL AND MISCELLANEOUS

Mithra and Dusares.—In *R. Hist. Rel.* LXXVIII, 1918, pp. 207-212, F. CUMONT discusses the Mithra relief found by Butler at Si in the Hauran in front of a small temple of Dusares (cf. *A. J. A.* XXII, 1918, pp. 54-62). This association of the two divinities is significant. Both were said to have been born from stones, and both were solar deities. On December 25, the votaries of Dusares at Rome descended into a crypt to celebrate the rebirth of the sun. The mysteries of Mithra evidently had an important part in spreading in the East the practice of celebrating the rebirth of the sun after the winter solstice.

The Number Forty in Antiquity.—In *C. R. Acad. Insc.* 1919, pp. 13-23, M. DIEULAFOY undertakes to explain why the numbers 3, 7, and particularly 40 had especial sanctity in antiquity. He shows that special qualities were attributed to these numbers, *e.g.* by the pyramid builders in Egypt, and that they were adopted by the Hebrews from them.

The Folding Fan in Antiquity.—In *B. Soc. Ant. Fr.* 1918, pp. 101-107, V. CHAPOT discusses the origin of the folding fan. It does not appear to have been exclusively a Japanese or Chinese invention as is stated in Daremberg and Saglio *s.v.* 'flabellum.' On a Roman relief found at Carlisle, England, dating from the third century A.D. such a fan is shown, and again on a relief at Autun which is a little earlier (cf. Espérandieu, *Recueil*, III, p. 82). Similar fans are to be found on Persian monuments of the third century. The writer thinks that the type originated in Persia. Palm leaf fans were common in Asia Minor from early times.

The Villanovian Wheel with Birds.—In *R. Arch.*, fifth series, IX, 1919, pp. 338-366 (66 figs.), G. H. LUQUET discusses the "roue à oiseaux" found in the decoration of fibulae and other bronzes of the Villanova culture. This consists of a wheel to which are attached (or with which are associated) in a symmetrical manner the heads and necks of two swans. Comparison of many examples

¹ The departments of Archaeological News and Discussions and of Bibliography of Archaeological Books are conducted by Professor BATES, Editor-in-charge, assisted by Professor C. N. BROWN, Miss MARY H. BUCKINGHAM, Dr. T. A. BUENGER, Professor SIDNEY N. DEANE, Professor HAROLD N. FOWLER, Professor HAROLD R. HASTINGS, Professor ELMER T. MERRILL, Professor LEWIS B. PATON, Professor A. S. PEASE, Professor S. B. PLATNER, Professor JOHN C. ROLFE, Dr. JOHN SHAPLEY, Professor ARTHUR L. WHEELER and the Editors, especially Professor MARQUAND.

No attempt is made to include in this number of the JOURNAL material published after December 31, 1919.

For an explanation of the abbreviations, see pp. 118-119.

shows that the wheel represents a chariot and that the birds were originally horses. There is then no reason to believe that the wheel has a solar significance. Similarly horses with wheels on their sides are abbreviated representations of chariots and horses.

Processes of Painting.—In *Mh. f. Kunstw.* IX, 1916, pp. 404-418, E. RAEHLMANN studies the development of the techniques of tempera, fresco, and oil painting with a view to learning what influences each had upon the others in the various epochs from ancient to modern times.

Hindu Statues Attributed to the Fifth Century B.C.—In *R. Arch.*, fifth series, IX, 1919, pp. 403 f. (fig.), S. R. gives a summary of an article which appeared in the *Journal of the Bihar and Orissa Research Society* (Patna, March, 1919, pp. 88-106) relating to two stone statues in the museum at Calcutta. The author, K. P. Jayaswal, declares that the inscriptions on the sculptures are earlier than Açoka, not, as General Cunningham believed, later. If the new readings are correct, the approximate dates of the statues, which are evidently related to Greek art, are 450 and 410 B.C.

The Cicada in China.—In *R. Arch.*, fifth series, IX, 1919, pp. 143-161 (2 figs.), G. GIESELER gives the facts of the life of the cicada, the Chinese beliefs (not altogether correct) concerning them, and the treatment of the insect in Chinese literature and art. The five virtues of the cicada are purity, incorruptibility, frugality, sincerity, majesty. It symbolizes the summer solstice. Cicadas of jade when pierced with a hole for a cord are mere amulets; when not so pierced they are of a peculiar light green color and are intended for the mouth of the dead. The cicada was sometimes eaten by the Chinese and was also used in medicine.

EGYPT

The Egyptian Calendar in the Third Century, B.C.—The correspondence between the Egyptian and Macedonian calendars during the third century B.C. is discussed by E. CAVAIGNAC in *B.C.H.* XXXVIII, 1914, pp. 5-20. Tables show the Julian date for the first of Thoth, the Egyptian date for the first of Dios, and the points of contact determined by the double dates contained in the documents. The battle of Sellasia is dated in June or July, 221 B.C., and the death of Ptolemy Euergetes in September or October of the same year.

BABYLONIA AND ASSYRIA

Assyrian-Babylonian Weights.—In *C. R. Acad. Insc.* 1919, pp. 150-157, Prince MICHEL SOUTZO points out that in Persia at the present time kernels of grain of different kinds are used in place of metal weights. This was true also in antiquity. It can be established mathematically that the kernel of wheat of the Romans was the same in weight as that of the Babylonians. This is important, for by means of it much may be learned about oriental weights, e.g. it can be shown that the heavy talent of Antioch is identical in weight with the talent of Susa. The Hebrew talent weighed 864,000 kernels, which is the same as the talent of double silver darics. Interesting correspondences work out also between Greek and Babylonian weights. The writer is able to establish certain tables. Thus 60 times the weight of a kernel of barley gives the weight of the Median siglos; 3,600 kernels equal the weight of the Median and neo-Attic mina; 216,000 kernels equal the weight of the Median and neo-Attic talent.

SYRIA AND PALESTINE

The Mosaic Inscription of Ain Douq.—In *C. R. Acad. Insc.* 1919, pp. 87–120 (fig.), C. CLERMONT-GANNEAU discusses the Aramaic mosaic inscription exposed by the explosion of a Turkish shell at Ain Douq, 7 km. northwest of Jericho, and reported to the French Academy by Major A. M. Furber. The mosaic lay four or five feet below the surface and had been badly injured in antiquity. It had formed part of the pavement of an old synagogue, not unlike the mosaic inscriptions of the synagogues of Kafr Kenna and Sepphoris, and had originally been surrounded with ornamental patterns. Major Furber reports in his possession a piece about two feet square representing two bunches of grapes, one black and the other white. It may date from the fourth century A.D. The inscription commemorates the gifts of a certain Benjamin, son of Joseph (Yoseh), and others to the shrine. Ain Douq should probably be identified with the ancient Noeros.

Three Rare Seleucid Coins.—E. ROGERS discusses in the light of history certain problems connected with coin-issues by the Seleucid kings of Syria. He explains the rarity of the date ΕΞΡ (= 165 of the Seleucid era, or 148–7 B.C.) on coins of Alexander Balas as due to the temporary suspension of Alexander's authority in that year by the intervention of Ptolemy Philometor. The monogram (on coins of Antiochus VIII) of a Ξ with a V resting upon its top-stroke he would interpret as standing for Scythopolis, the place of minting. He throws light on the history of Philip Philadelphus by means of a tetradrachm with the new date ΓΚ. (*Num. Chron.* 1919, pp. 17–34; pl.)

Pre-Imperial Coinage of Roman Antioch.—A series of tetradrachms with the name and types of the Seleucid king, Philip Philadelphus, and the letters ΑΥΤ (in monogram) cannot possibly have been struck in the reign of that monarch, and must be ascribed (with cognate bronzes) to the period 47–7/6 B.C., when Antioch was viewed as an "autonomous" state. (E. T. NEWELL, *Num. Chron.* 1919, pp. 69–113; 2 pls.)

GREECE

ARCHITECTURE

The Entrance to the Acropolis under the Empire.—In *B. C. H.* XXXVIII, 1914, pp. 272–295 (2 figs.), P. GRAINDOR discusses the later additions to the Periclean entrance to the Acropolis. An examination of a corrected text of the lists of *πυλῶροι* (*I. G.* III, 1284) leads to the conclusion that the monumental staircase is a work of the time of Claudius. The masons' marks, incorrectly given by Bohn, and the handling of the material point to a late date for the flanking towers of the Beulé gate, which are probably the *πυλῶνες* given by Marcellinus (*I. G.* III, 398). The inscription, however, is to be dated about the end of the fourth century, when the invasion of Alaric probably led to the construction of fortifications in front of the Propylaea. The Beulé gate is later than the towers and is tentatively dated in the seventh century.

A Forgotten Drawing of the Parthenon.—In *Jb. Kunst. Samm.* XXXII, 1915, pp. 403–415 (pl.; 8 figs.) H. SITTE publishes Dalton's plate showing the southeast corner of the Parthenon in 1749. The seven eastern metopes of the south side were then in position, and their order, as drawn by Dalton, is

exactly that of the last seven metopes in the series drawn by Nointel's artist in 1674. Since the first eight of this series are certainly the western metopes of the south side, it is necessary to return to the old view that Nointel's artist drew only the thirty-two metopes on the south side. This leads to the conclusion that all this series must be interpreted as referring to the battle of the Centaurs and Lapiths, conceived as a single continuous representation rather than as thirty-two individual groups.

The Delphian Treasuries.—Literary sources record thirteen treasuries at Delphi, while the excavations have revealed twenty-four foundations of the type usual in such buildings in the precinct of Apollo and two in that of Athena Pronoia. In *B. C. H.* XXXVI, 1912, pp. 439-493 (pl.; 6 figs.), W. B. Dinsmoor studies these remains with a view to determining their identity and dates. This involves an examination of the narrative of Pausanias, of the foundations and the scattered blocks which can be connected with the several structures, and of the results obtained by earlier investigators. Especial attention is given to the site of the Cnidian treasury, to the remains of the earlier and later Syracusan treasuries, which can be restored in many details, and to the identity of the structures in the Marmaria. Here one of the small buildings is assigned to the treasury of Massilia and Rome, while the *κάρω ναοί* of Plutarch are identified with the temple of Athena Pronoia (rebuilt about 510 B.C.) and the other small building, which was the expiatory chapel proper. The successive periods in the history of the Marmaria and in the growth of the precinct of Apollo are briefly traced and the article concludes with a chronological list of the several treasuries, named and nameless. *Ibid.* XXXVII, 1913, pp. 5-83 (pl.; 13 figs.) the same writer discusses the four Ionic treasuries, the Cnidian (565 B.C.), Clazomenian (550 B.C.), Massiliot (535 B.C.), and Siphnian (525 B.C.), considering both their restoration and their architectural relations. From foundations to acroteria the surviving blocks are carefully collected, listed, and assigned to their places in the several structures, with minute analysis and discussion of all significant details. It is found that the Cnidian treasury was severe and devoid of sculpture, except for two Caryatides in front, here probably used for the first time. The Clazomenian and Massiliot treasuries were Aeolic; scarcely anything has survived from the former, but of the latter little is lacking for a complete restoration on paper. The Siphnian treasury might almost be reërected from the original stones; it is the best proportioned and most finished of them all. On the model in the museum at Delphi only the dedicatory inscription is Cnidian, some of the details are Massiliot, but the greater part is Siphnian.

The Corinthian Treasury at Delphi.—In *B. C. H.* XXXVI, 1912, pp. 642-660 (3 figs.), E. BOURGUET discusses the position of the Corinthian Treasury at Delphi. He places it to the east of the staircase leading up from the sacred threshing floor, and southwest of the foundations assigned to it by Karo (*Ibid.* XXXIII, 1909, pp. 201-209) and Pomtow (*Berl. Phil. W.* 1909, cols. 315-330). Excavations at this site have shown remains of tufa foundations, and it is also possible to identify other blocks as from the walls of the building.

The East Pediment of the Archaic Temple at Delphi.—It has long been known that in the archaic temple of Apollo at Delphi the sculptures in the west pediment were of poros and in the east of marble. The fragments of the latter were carefully studied by Homolle (*B. C. H.* XXV, 1901, pp. 457 ff.; cf. *A. J. A.*

VII, 1903, pp. 463 f.), who reconstructed two animal groups in the angles and the contest between Apollo and Heracles in the centre. The problem is again discussed in *B. C. H.* XXXVIII, 1914, pp. 327-350 (2 pls.; 13 figs.) by F. COURBY in the light of additional fragments and more accurate knowledge of the surface of the tympanum. The groups in the angles are unchanged but it is suggested that similar smaller groups occupied the extreme corners. The centre is occupied by a group of Apollo, Leto, and Artemis in a quadriga, facing the front as in the metope from Selinus. On each side are two male figures and beyond them two females in the costume and attitude of the *kórai* (Fig. 1).

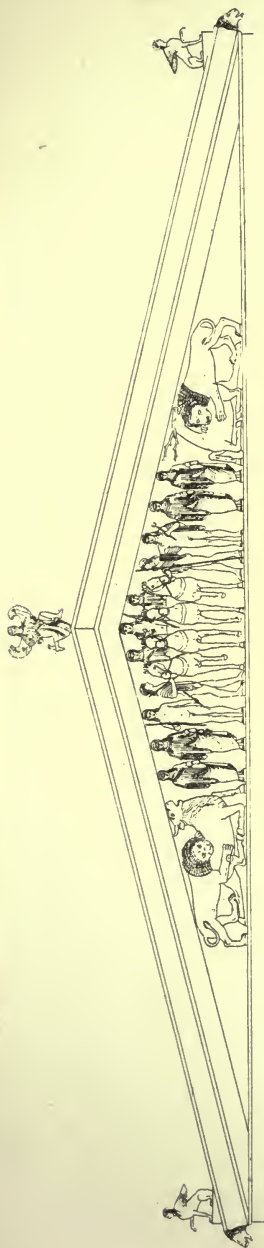


FIGURE 1.—RESTORATION OF THE EAST PEDIMENT OF THE OLD TEMPLE OF APOLLO AT DELPHI.

SCULPTURE

Early Mycenaean Reliefs.—In a comprehensive study of reliefs of the early Mycenaean period, both in Crete and on the mainland of Greece, K. MUELLER (*Jb. Arch. I.* XXX, 1915, pp. 242-336; 4 pls.; 34 figs.) discusses the origin and course of the strong naturalistic movement in Cretan art of the Palace period, its relation to foreign sources, to the earlier similar appearance in Early Minoan III, and to the art of painting on the one hand and to sculpture in the round on the other; the native tendency to geometric and conventionalized forms in Greece and the Aegean; the influence of these two tendencies upon one another; and the mixture of foreign and native elements in the art of the stelae and contents of the shaft-graves of Mycenae. His examples extend from the Reaper vase and other steatite vases from Hagia Triada to the gold cups of Vaphio, of which eight new photographs are given, and they include the stucco and faience reliefs of Knossos, the small gold plaques and ornaments, the inlaid weapons and silver vases of Mycenae, and many lesser objects. The "Besieged City" and the large round silver vase with combat scenes from Grave IV, he places earlier, on stylistic grounds, than the art of the older beehive tombs represented by the Vaphio cups. The latter, though certainly designed as a pair, are not executed by the same hand. He concludes that the princes whose tombs in

Argolis were so richly furnished were not foreign invaders ruling a conquered population, but native rulers who patronized both native and imported art and artists. Although the foreign influence is closely allied to what is known of Cretan art, it is not identical with this, and its real origin is at present unknown, but may perhaps lie in the yet unexplored western half of the island.

A Forgotten Artist.—The sculptor Pollias, whose name appears on two bases found in the Persian débris on the Acropolis, is tentatively identified by C. ROBERT (*Jb. Arch. I. XXX*, 1915, pp. 241–242) with the father of the red-figured vase painter Euthymides and with the Pollis mentioned by Vitruvius as a writer on *symmetriae* and by Pliny as a maker of votive statues. As the dedicator mentioned in one of the inscriptions is Crito, son of Scythes, presumably the black-figured vase painter of that name, the sculptor was apparently a contemporary of Antenor, and it is possible that among the Acropolis Maidens the figures to which the two bases belong might be identified. Unfortunately the bases have been removed to the National Museum while the statues remain on the Acropolis.

The "Mourning Athena."—In the relief of the "mourning Athena" the pillar is to be interpreted as the narrow face of a stele, the broad face of which is turned toward the goddess who is reading the inscription thereon. She appears with her usual lance and helmet as the guardian of the law. If the relief commemorates some important vote, it may perhaps be connected with the decision to build the Parthenon. (A. DE RIDDER, *B. C. H. XXXVI*, 1912, pp. 523–528.)

The Athena of Myron.—In *R. Arch.*, fifth series, IX, 1919, pp. 202 f., S. REINACH briefly notices an article by Jamot (*Mém. de la Soc. archéol. du Midi*, XVII) on the replica of the Athena of Myron which was found at Chiragan and exhibited in the museum at Toulouse. Reinach suggests that this replica, in which the lance appears to have rested on the ground, may have been intended to stand alone, not in a group with Marsyas. Some criticisms of Jamot's article are added.

Myron of Thebes.—A celebrated statue of a drunken old woman, known from epigrams and replicas such as the marble in Munich was the work of Myron (Plin. *N. H. XXXVI*, 32). It is clearly not the work of Myron the Athenian. In *B. C. H. XXXVII*, 1913, pp. 359–377 (5 figs.), J. SIX assigns it to Myron of Thebes, who worked at Pergamum about 240 B.C. on the statues celebrating the victory over the Gauls. To him may also be ascribed tentatively the head of a Gaul from Delos (*Ibid. XXXIV*, 1910, pl. IX), the statue of Philip of Pellene, the pugilist, at Olympia, assigned by Pausanias to Myron, the statue of Ladas at Argos, as may be inferred from the language of the epigrams, and the so-called Seneca, best represented by the bust from Herculaneum. In the extant works the *open mouth*, either singing or breathing hard, is prominent, and the same feature is emphasized in the literary notices of lost works. It seems also that in his realism, which did not shrink from the ugly or repulsive, Myron resembled the painter Pauson. Here, as elsewhere, the painter preceded the sculptor in developing new tendencies. *Ibid. XXXVIII*, 1914, pp. 479–480, F. HAUSER corrects a statement of Six as to his view of the relation of the pancratiast of Autun to Polyclitus.

The Cephissus of the West Pediment of the Parthenon.—The "fluid" lines of the recumbent figure at the north end of the west pediment of the Parthenon,

both in the torso and more especially in the drapery, and the force which seems to bind it to the stream in which it lies, scarcely able to rise and turn enough to look at what is taking place in the centre of the scene, are in themselves sufficient proof that it represents a river god. But further evidence is found in a statue evidently copied from this one in Roman imperial times, which had a water-jar lying under the left arm and was used as a fountain. This statue was found at Autun in 1640, and has since disappeared, but it is known from the description given in the *Histoire de l'antique cité d'Autun*, of 1660, and from a drawing lacking the head, in E. Thomas's new edition of this work, of 1846. It has been suggested that the figure next to the Cephissus is the Eridanus, leaving the two in the opposite corner of the pediment for the Ilissus and the nymph Callirrhoe. (C. ROBERT, *Jb. Arch. I.* XXX, 1915, pp. 237-241; 3 figs.)

A Head of Heracles.—In *B. C. H.* XL, 1916, pp. 143-144 (fig.), C. DUGAS publishes a head of Heracles found some time ago at Tegea. The hero wears the lion's head as a helmet, and the paws were originally crossed on his breast. The statue must have belonged to the same type as four representations of Heracles discussed by Arndt, *Einzelstudien*, III, p. 10, No. 593A. The head also resembles that on a statuette of Asclepius from Epidaurus, and like it springs from the Praxitelean tradition.

The Colossus of Rhodes.—In *R. Arch.*, fifth series, IX, 1919, pp. 64-76, F. PRÉCHAC collects and discusses references to the Colossus of Rhodes in ancient literature. From these he concludes that the statue of Helios stood in a chariot drawn by four horses. The whole was supported by a great base adorned with semicolumns. The well known metope from Ilium may give some idea of the general appearance of the colossal group.

The Antinous of Delphi.—In *B. C. H.* XXXVII, 1913, pp. 323-339 (4 figs.), G. BLUM compares the statue of Antinous discovered at Delphi with its reproduction on a large bronze coin of Delphi now in Vienna. The coin indicates that the statue was dedicated by T. Flavius Aristotimus, high-priest of Apollo, at the time of Hadrian's visit in 125 A.D. It also shows that at Delphi Antinous was honored as *ἥρως προπύλαιος*. This epithet is not due to his assimilation with either Hermes or Apollo, nor to the position of his statue, but probably to his association by the Delphians with their local hero, Autonous (Hdt. VIII, 37) whose shrine was near the entrance to the town. The coin reproduces the statue accurately, except in those points where alteration was imposed by the difference in technique. It seems that the left arm of the statue was raised as if the hero had just placed a crown upon his head,—a gesture developed from that of the Polyclitan Cyniscus. Analogous treatment of other statues upon coins is also discussed.

Portraits of Hellenistic Princes.—In *B. C. H.* XXXIX, 1915, pp. 17-32 (pl.; 2 figs.), G. BLUM publishes: (1) a gem in the *Cabinet des Médailles*, which by the aid of coins he identifies as a portrait of the young Ptolemy IV, Philopator, who, he argues, was born later than the date of the decree of Canopus, and was not over seventeen when he ascended the throne; (2) two gems in the Louvre showing an Egyptian prince with the simple Hellenistic diadem in one, and the attributes of the Pharaoh in the other, probably Ptolemy VI, Philometor; (3) a marble head from the west slope of the Acropolis in Athens (*Ath. Mitt.* XXI, 1896, pl. X), which may well be a portrait of Antiochus VIII, Grypus. It shows a precision in detail without loss of personal expression such as is found in few works of Hellenistic art.

VASES AND PAINTING

"Rhodian Geometric" Vases.—In *B. C. H.* XXXVI, 1912, pp. 495-522 (2 pls.; 13 figs.), C. DUGAS collects the principal examples of "Rhodian geometric" vases already published, adds three new examples of the developed style, and discusses the place of the "Rhodian" group among the geometric vases, and the region whence this group comes. He concludes that these vases show much closer connection with the geometric of Thera and the Cyclades than with that of Athens and Attica. The evidence also indicates that the vases were made chiefly in Rhodes and Miletus. These places, or southwestern Asia Minor in general, are also the chief sources for the orientalizing "Rhodian" ware.

Attic Black-figured Vases in Red-figured Style.—Pottier's general assumption that the red-figured style did not abruptly displace the black-figured, and that the later style is largely used in the old technique at the end of the sixth century is given concrete illustration by F. HOEBER in *Mh. f. Kunstw.* XI, 1918, pp. 33-51 (7 pls.). A number of late black-figured vases from various collections are stylistically analyzed and clear parallels with red-figured work are pointed out in the types of heads, treatment of drapery, freedom of movement, and other details.

A Crater in Catania.—In *R. Arch.*, fifth series, IX, 1919, pp. 37-47 (3 figs.), S. MIRONE describes and discusses a red-figured calix-crater (*vaso a campana*) in the Museo Biscari at Catania, which is published in several places (e.g. Levezow, 'Ueber die Entwicklung d. Gorgonen-Ideals', *Abh. Berl. Akad.* 1832, pl. 3; Inghirami, *Vasi fittili*, I, pls. 70, 71). The figures on the front of the vase are Andromeda, Athena, Perseus, Cepheus, and Phineus; the scene is on the seashore, immediately after the liberation of Andromeda. On the reverse are Poseidon, a nymph, and the two sisters of Medusa. The execution of the painting is very fine. Its date is not long after 460 B.C.

The Sacrifice of Polyxena on an Apulian Crater.—In *Atene e Roma*, XXII, 1919, pp. 99-102 (fig.), MARIA DOLORES BELLISAJ argues that the fragment of an Apulian crater with figures of a girl with a youth on each side standing before an Ionic column (cf. *Neapolis*, II, pp. 136 ff.; IV, pp. 266 ff.) really represents Polyxena being led to the tomb of Achilles for sacrifice.

Delian Vases with Decoration in Relief.—Among the Hellenistic vases with decoration in relief is a clearly marked group made of a fine red clay with a brilliant red glaze, which, however, through unequal baking is not of uniform tint and is even sometimes black. The decoration consists of figures or ornaments moulded separately (the vases are wheel made) and applied *à la barbotine*. This group, as represented at Delos, is discussed in *B. C. H.* XXXVII, 1913, pp. 418-442 (6 figs.) by F. COURBY. It is closely connected with similar vases in metal and some of the figures seem directly moulded from such works. The vases are certainly not of Delian manufacture, and all the evidence confirms the view of Zahn that they are of Pergamene origin. They seem to have been made between 150 B.C. and 50 A.D. The resemblance to the Arretine pottery is striking in spite of the difference in technique. Possibly the types were brought to Arezzo by Asiatic workmen, such as Tigranes and Bargates.

Clazomenian Sarcophagi.—In *B. C. H.* XXXVII, 1913, pp. 378-417 (7 pls.; 9 figs.), C. PICARD and A. PLASSART publish ten Clazomenian sarcophagi. Six were in dealers' hands in Smyrna in 1912, one in Ny-Carlsberg, two in the

Athens museum, and one in the *Musée du Cinquantenaire* in Brussels. Each is minutely described and illustrated. The general discussion treats of the form, technique, and decoration. Seven of the sarcophagi have the usual trapezoidal form, the other three belong to the small and later group with a rectangular top. One of these, like the specimen in the British Museum, has a cover. The technique shows the common outlines on light ground and solid silhouettes. One sarcophagus has a row of rosettes in outline on black ground. The decoration consists of the usual floral and geometric ornament, animals, among which two swans are noteworthy because of the rarity of birds on these sarcophagi, and human figures. Two winged horse-men may well be the Dioscuri, and other winged figures are probably mythological, though there is not sufficient evidence to assign them names. There are also the usual scenes of fighting, chariot racing, and other contests. In conclusion attention is called to the fact that while most of these sarcophagi come from Clazomenae, specimens have been found elsewhere, and the painted terracotta sarcophagus seems to be early and widespread in Asia Minor.

INSCRIPTIONS

The Dates of Athenian Archons under the Empire.—In *B. C. H.* XL, 1916, pp. 74-77, P. GRAINDOR presents additional epigraphic evidence which leads him to fix the dates of certain Athenian archons somewhat later than he did in an article, *ibid.* XXXIX, 1915, pp. 391-394. His new series is as follows: Callistrates 152/3 A.D., Attalus 153/4, Phileas 154/5, Aelius Alexandros II 155/6, Rufus 156/7. These changes necessitate altering the dates of other monuments from those given in the earlier study. Further evidence is also produced for placing the archonship of Metrodorus and the portrait of Heliodorus before 111/2 A.D.

The Return of the Tegean Exiles.—In *B. C. H.* XXXVIII, 1914, pp. 101-188 (2 pls.; fig.), A. PLASSART publishes with a detailed historical and linguistic commentary the inscription from Delphi (*I.G.* V, 2, pp. xxxvi f. D1) containing the regulations of the city of Tegea concerning the return of certain exiles. The decree embodies amendments intended to remove difficulties which had arisen in the interpretation of an earlier document, which is identified with the edict issued by Alexander in 324 B.C. authorizing the return of all Greek exiles to their cities.

The Inscription of Aristotimus at Delphi.—In *B. C. H.* XXXVI, 1912, p. 494, A. D. KERAMOPOULOS publishes a small additional fragment of the inscription of the priest, Aristotimus (*Ibid.* XXXV, 1911, pp. 492 f.; cf. *A. J. A.* XVI, 1912, p. 580): It confirms his restorations except that the name is written *Ἀριστότειμος*.

The Will of a Thessalonian Priestess.—In *B. C. H.* XXXVIII, 1914, pp. 38-62, C. PICARD and C. AVEZOU discuss a Greek inscription, containing the will of a priestess, formerly embedded in the pavement of the mosque, Eski-Djuma, and recently removed to a Lyceum in Salonica. It has been known since the eighteenth century and was published by Perdrizet (*Ibid.* XXIV, 1900, p. 321; cf. *A. J. A.* V, 1901, p. 455). The authors correct the beginning of the will, reading *ἱέρεια οὐτα Εὐεία Πρινοφόρον*, thus removing all reference to a (Dionysus) Prinophoros. In lines 9 ff. they read *ὅπως ἀποκέηται (ἀποκαίηται) μοι*, referring to the rite of *ἀπόκανσις*, which is explained, in the

light of texts from Macedonia and Asia Minor, as the burning of roses at the tomb. In Macedonia the presence of roses in the funeral ceremonies is not to be derived, as Perdrizet supposed, from the Roman *rosalia*, but rather from the cults of Asia Minor.

The Date of the Portico of Antigonus at Delos.—In *B. C. H.* XXXVIII, 1914, pp. 296–299, F. COURBY on the evidence of inscriptions places the construction of the Portico of Antigonus Gonatus at Delos between 260 and 248 B.C. It was, therefore, probably given at the time of the foundation of the Antigoneia, which were first celebrated either in 254 or 252 B.C.

A Senatus Consultum from Delos.—In 1911 there was discovered at Delos in a small Serapeum (the third sanctuary of the Egyptian gods found on the island) a stele bearing a decision of the Roman Senate establishing a certain Demetrius in his former rights in this temple. It was published by Cuq in *Mem. Acad. Insc.* XXXIX, 1912, pp. 139–161. As his commentary was concerned chiefly with the legal aspects of the document, it is republished with a historical discussion by P. ROUSSEL in *B. C. H.* XXXVII, 1913, pp. 310–322 (pl.). He dates it early in 164 B.C., and connects it with the troubles that followed the reestablishment of Athenian rule in 166. Demetrius seems to have been the hereditary priest of a private cult of Serapis, established in the third century, who had been dispossessed by the Athenians, when the Delians were expelled from the island. He appealed to the Roman Senate, and the inscription shows that he brought their vote of advice to Athens, where the Generals and Council approved it, and in consequence transmitted the order of reinstatement to Delos.

Curses.—A stele of Delos (*I. G.* XI, 1296) contains on both faces the same inscription, in which the priest and priestesses place under a curse those who carry off slaves or other property from the precincts of Apollo. In *B. C. H.* XXXVIII, 1914, pp. 250–271, R. VALLOIS studies this inscription and the nature of *apai* in general according to Greek ideas, correcting in some details the views of Ziebarth (*Hermes*, XXX, 1895, pp. 57 ff.). The curse owes its effect to the power of the one who pronounces it over those against whom it is pronounced. While essentially religious, it does not invoke the justice of the gods nor seek to secure their aid by magic. It is a public social act, an exercise of authority.

An Inscription of Tenos.—In *B. C. H.* XXXVIII, 1914, pp. 444–446, P. GRAINDOR defends his readings of an inscription of Tenos (*Musée Belge*, 1911, pp. 253 ff.) against the criticisms of Wilhelm in *Arch. Eph.* 1914, p. 87.

The Temple Inscription of Lindus.—In *Hermes*, LI, 1916, pp. 491–498, B. KEIL discusses the literary style of the great temple inscription of Lindus. He finds that Timachidas avoids hiatus, writes rhythmic prose, and that he follows the rules of the rhetoricians for narrative composition.

GENERAL AND MISCELLANEOUS

Ancient Greek Harbors, Lechaëum and Delos.—The late J. PARIS, who fell in April, 1915, at Koum-Kaleh, Dardanelles, had begun a study of the remains of ancient Greek harbors, two parts of which have been published. The first, *B. C. H.* XXXIX, 1915, pp. 5–16 (fig.), deals with Lechaëum. There were two large outer basins, each protected on the west by a mole. Narrow passages, about 14 m. wide, led to two connected inner basins, from which opened four smaller basins or docks with quays. The remains are

scanty, but sufficient to show that the arrangements were well adapted to furnish protection against the prevailing winds and to hinder the silting up of the port. The article enlarges and corrects the account of S. Georgiades, *Les ports de la Grèce dans l'antiquité qui subsistent encore aujourd'hui*, Athens, 1907.

The second article, *ibid.* XL, 1916, pp. 5-73 (map; 39 figs.), is a detailed account of the moles, quays, and other harbor works of Delos. The author considers first the physical and historical causes for the development of this island as a trading centre, and then passes to a description of the principal harbor, with only a brief notice of the smaller harbors of Skardhana and Ghourna. By the aid of soundings and the scanty remains along the shore it is possible to determine five, or perhaps six, basins, separated by moles for the most part of small projection. The first and largest basin, with the Agora of Theophrastus at the north and that of the Competaliaistae at the south end, furnished ample space for the mooring and unloading of many ships. The other basins, extending along the shore toward the south, were all smaller, shallower, and less sheltered. The quays that lined the shore were probably much like those now in use on Myconos and other islands. They were paved and on the land side bordered by shops, warehouses, and other buildings, not always directly connected with commerce. While there are traces of a sheltering mole at a very early period, and of a rudimentary quay near the sanctuary during the fifth century, the great development of the harbor belongs to the first part of the second century B.C. when Delos had become a great commercial rather than religious centre.

Greek Beacons and Light-Houses.—In a controversial article (*Jb. Arch.* I. XXX, 1915, pp. 213-237; 3 figs.), H. THIERSCH cites numerous passages from ancient writers, with corroborative testimony from coins, to prove that the Greeks from the earliest times had a system of fire and smoke signals and were familiar with the practice of sailing at night and with the use of beacon fires to guide night voyagers, especially to mark harbor entrances and good landing places. The fire was sometimes elevated on pillars as at the harbor of the Piraeus, and sometimes on a tower with large windows in the upper story for the light to show through. Of these towers the great Pharos at Alexandria was the most splendid example. The view of certain modern engineers, not classical scholars, that such towers were built and used only for day service until the Romans in the time of Tiberius introduced the use of fire for night signals, is shown to be quite untenable.

Nemesis.—In *B. C. H.* XXXVIII, 1914, pp. 89-100 (3 figs.), P. PERDRIZET continues his studies of monuments relating to Nemesis (*Ibid.* XXII, 1898, pp. 599 ff.; XXXVI, 1912, pp. 248 ff.; cf. *A. J. A.* IV, 1900, p. 528; XVI, 1912, p. 573). He discusses first a relief from Salonica bearing the figure of Nemesis and a dedication to the θεὸς ὕμνος. He then examines the relation between this deity, Nemesis, and the representation of raised hands. The latter is a Semitic symbol of prayer, especially against an enemy, and was used by Judaisers, who thus united with their supreme god in prayers for justice this symbol and the Greek goddess, Nemesis. Finally he considers Nemesis as invoked in connection with agonistic victories.

A Greek Mirror from Rossano.—In 1906 some tombs containing Greek antiquities were discovered by accident at Rossano. The most important objects found in them were two small black-figured lecythi and a large bronze

mirror. The latter when complete had a height of 38.7 cm. The handle is in the shape of a woman, clothed in a Doric chiton, standing on a small base and by means of her raised hands supporting the disk of the mirror, which also rests upon a cushion on her head. The back of the disk is engraved with an elaborate rosette design. Above the disk was a small rooster with a ring for suspension. The mirror is an excellent specimen of the work of a Greek artisan and probably dates from the second quarter of the fifth century B.C. (P. Orsi, *Boll. Arte*, XIII, 1919, pp. 95-101; 5 figs.)

Greek Politics and the Delphian Naopoioi.—The lists of the *ναοποιοί* of Delphi show that representation in this body was not definitely fixed, but varied both in the states represented and in the size of the respective delegations. It seems natural to suppose that the composition changed with political and economic conditions. In *B. C. H.* XL, 1916, pp. 78-142, P. CLOCHÉ analyses the extant lists of *ναοποιοί* between 356 and 327 B.C. and compares the results with the literary evidence as to the relations of the several states during that period. He finds that there is in general a marked parallelism between the representation accorded the different states and their relative importance, or their relation to the sanctuary and its special protectors at a given time. This is especially evident about 346/5 and 338 B.C. The author adds that this parallelism is not always perfect, and that life in Delphi was not always a complete reflection of general Hellenic conditions.

Archaeological Papers.—In Volume 28 of the *Proceedings* of the Numismatic and Antiquarian Society of Philadelphia (Philadelphia, 1919), there are two papers of archaeological interest. Pp. 167-183 Professor WILLIAM N. BATES describes 'Nicholas Biddle's Journey to Greece in 1806.' Biddle was the first American to travel in Greece and the account given is based upon his unpublished journal from which numerous quotations are made. His route extended from Zante along the northern coast of the Peloponnesus, across the Gulf to Delphi, then to Livadia, Thebes, and Athens. He copied inscriptions and made notes of ancient remains in various places. Pp. 185-197 Dr. STEPHEN B. LUCE gives an account of the 'Civilization of Crete in Prehistoric Times,' in which he describes the discoveries at Cnossus, Phaestus, Hagia Triada, and elsewhere.

Studies in Greek Magic.—In *B. C. H.* XXXVII, 1913, pp. 247-278 (2 pls.; fig.), A. DELATTE begins a series of studies in Greek magic by publishing a curious marble sphere found in the theatre of Dionysus in Athens in 1866. It is covered with inscriptions and figures in low relief. The relief represents a divinity crowned with rays enthroned beneath a canopy, and holding a whip in one hand and a sceptre terminating in three torches in the other. At his feet are two dogs, one of whom is also crowned with rays. On one side are a torch, a seated lion, and a human-headed serpent; on the other a circle enclosing a row of five small overlapping circles and various signs. Above the heads of the lion and serpent is another circle containing a triangle. Greek letters arranged in groups or forming unintelligible words are scattered over the surface. A detailed study of this symbolism and a comparison of magic papyri and other literary evidence lead to the conclusion that we have here a magical monument connected with the solar cult and similar to those described, with directions for making, in the papyri. As it was found in the theatre, it may have been prepared and placed there to secure success in theatrical con-

tests. *Ibid.* XXXVIII, 1914, pp. 189-249 (10 figs.) the studies are continued by a discussion of the 'Ακέφαλος Θεός in Graeco-Egyptian magic. A gem in Athens shows a nude male figure, headless and with his hands bound behind his back; in the field are a sword thrust into the ground, an ass's head, and the inscription ΒΑΧΥΧ. The magical papyri, where the 'Ακέφαλος Θεός is frequently invoked, show that the divinity was identified with the Sun, and also at times with Set-Typhon, Osiris, and Bes. The headless god finds, perhaps, its origin in the legend of the mutilation of Osiris, but the magic rites, as for example the *μυστήριον* of the sacred scarabaeus, show that these representations are also connected with the magician's threats to bind and torture the divinity unless his demands are granted. Several of the papyri are published in revised texts and discussed at length.

Zagreus and Aristotle.—In *R. Arch.*, fifth series, IX, 1919, pp. 162-172, SALOMON REINACH, attributing to Aristotle (Problem 43, Bussemaker, Aristotle, IV, p. 331) the statement (Athenaeus, XIV, 20, p. 656 A) that boiled meat must not be roasted or boiled again, connects it with the boiling and roasting of Zagreus by the Titans. This was a part of the Eleusinian mysteries, and references to it are contained in a fragment of Pindar (ed. Sandys, p. 390) and in Virgil's *Aeneid*, IV, 58. The pomegranate sprang from the blood of Zagreus; hence the prohibition of it in the Eleusinian ritual; hence also the reticence of Pausanias (II, 7, 4) concerning it in his description of the Hera of Polyclitus.

ITALY

ARCHITECTURE

The Roman Theatre at Merida.—In *R. Ét. Anc.* XXI, 1919, pp. 193-209 (13 figs.), R. VALLOIS discusses, as a result of special studies made in 1916, the architectural peculiarities of the *paradoi* of the Roman theatre of Merida. He also discusses various details of the *cavea* and shows that when it was constructed no permanent building was erected in front of it. The *pulpitum*, *versurae*, and *scaenae frons* were probably temporary wooden structures. The colonnade behind the theatre is of later date.

COINS

Roman Coinage.—In *Cl. Phil.* XIV, 1919, pp. 314-327, T. FRANK attempts to show (1) that Ostia was colonized between 358 and 349 B.C.; that the ship's prow on early Roman coins commemorates this colonization, rather than the capture of the fleet of Antium in 338; and, consequently, that this coinage began shortly after the establishment of Ostia as a colony; and (2) that the Romans maintained a bimetallic policy down to about 150 B.C. (when the bronze *as* was withdrawn from circulation), during which period the bronze coinage was kept at very nearly its intrinsic value.

Roman Monetary System.—The second part of E. A. SYDENHAM's history of Roman coinage on its systematic side carries the account on from Augustus through Diocletian, and is to be further continued. (*Num. Chron.* 1919, pp. 114-167.)

Last Issues of Gold and Silver from the Senatorial Mint of Rome.—H. MATTINGLY outlines, with chronological tables, a new system of accounting

for and dating the series of rare aurei and denarii that refer to Augustus as emperor but bear the names of fifteen different mint-masters. (*Num. Chron.* 1919, pp. 35-44.)

Thurinus, the Surname of Augustus.—Suetonius (*Aug.* 7) makes the statement that Augustus when an infant was given the surname Thurinus. In *C. R. Acad. Insc.* 1919, pp. 134-142, A. BLANCHET shows that he did not abandon this name when he became emperor. Among the coins struck by him for distribution at the Saturnalia was one with the figure of a bull charging to the left which was especially common from 12 to 10 B.C. The type belongs to the city of Thurium and its use by Augustus is an allusion to the name Thurinus which he received from his father. The type with the bull was also appropriate to Augustus because of its astrological significance.

Tribunician Years of Nero.—An anonymous article in *Num. Chron.* 1919, pp. 199-200, suggests that the occurrence of TR.P.VII (instead of the expected TR.P.VI) in an Arval inscription of Jan. 1, 60 A.D., which has caused difficulty to historians in the dating of Nero's tribunician years, ought to be considered a mere stone-cutter's error; for the coins are against it, and their series of dates is consistent throughout.

GENERAL AND MISCELLANEOUS

Scenes from the Aeneid on a Gladiator's Helmet.—One of the helmets found in the barracks of the gladiators at Pompeii is decorated with figures in high relief which have been supposed to represent an Iliupersis. In *Atene e Roma*, XXII, 1919, pp. 113-127 (4 figs.), D. COMPARETTI shows that there are several distinct scenes all of which belong to the story of Aeneas and Iulus, and that they were directly inspired by the *Aeneid*. He calls attention to the fact that in graffiti found at Pompeii the title *Iulianus* is added to the names of certain gladiators. The men so called probably belonged to the imperial house, and perhaps came from the gladiatorial school at Capua. This helmet with reliefs glorifying Iulus, therefore, belonged to some *Iulianus*.

A Praenestine Cista.—In *B. R. I. Des.* VII, 1919, pp. 39-41 (fig.), L. A. S. publishes a cista owned by the Rhode Island School of Design. The subjects engraved on the bronze are not recognizable in every detail, though some of them are apparently concerned with a story of Poseidon. A group of figures in the centre of the cylinder represents a scene at the bath and a group of gods. The borders of ivy indicate the provenance of the work as Praeneste, and it is probably to be dated near the middle of the fourth century, B.C.

FRANCE

The Louvre during the War.—Under the title *Le Musée du Louvre pendant la Guerre 1914-1918* (Paris, 1919, Imprimerie Général Lahure. 20 pp.; 4 figs.; also *R. Arch.*, fifth series, IX, 1919, pp. 367-375), E. POTTIER describes the measures taken to protect the ancient monuments and works of art in the Louvre during the war. The more important antiquities were removed to the basement, or protected by timbers and sand bags in the galleries where they had been exhibited. All the important paintings and tapestries were removed either to Toulouse or to Blois. They have since been returned to the Louvre entirely uninjured.

Antiquities at Bayonne.—In *R. Arch.*, fifth series, IX, 1919, pp. 77–97 (14 figs.) is a summary description, by RAYMOND LANTIER, of the antiquities in the Léon Bonnat collection of the museum at Bayonne. There are eight Egyptian statues (including one head without body); twenty-eight Greek or Roman statues, torsos, and heads of marble or other stone; eleven Egyptian bronzes; thirty Greek and Roman bronzes, six of which are fragments of statues, the rest statuettes; two Etruscan bronzes; eighty-one Greek terracottas, of which two are large heads, seven are reliefs, and the rest statuettes; ten Egyptian figurines of colored paste; six Egyptian portraits painted on plaster; and four more or less fragmentary carved objects of bone. These are Greek work.

Gallo-Roman Reliefs.—In *R. Hist. Rel.* LXXVIII, 1918, pp. 143–161, W. DEONNA examines the three Gallo-Roman reliefs in the museum at Dôle discussed by Toutain (*ibid.* 1916, pp. 117 ff.) and others. He thinks them undoubtedly genuine, and is able to cite numerous parallels to the objects represented. They are emblematic of some celestial divinity, the giver of fertility and source of life.

The Neolithic Axe of Loudun.—In *R. Ét. Anc.* XXI, 1919, pp. 219–222, W. DEONNA discusses the neolithic axe with the sign of a key upon it found at Loudun. The key was evidently engraved in Roman times. The axe was a funerary amulet, and the purpose of the key was to open the portals of the other world to the dead.

The God Alisanus.—In *B. Soc. Ant. Fr.* 1917, pp. 214–216, J. TOUTAIN discusses the character of the god Alisanus, but is unable to reach a definite conclusion. He may have been a tree god (*cf. alisa* or *aliso*, a Ligurian or Germanic word for the beam-tree), or a river god. Many streams in France have names derived from Alisantia, Aliso, or Alisa.

Rafts of Inflated Skins in Roman Gaul.—In *B. Soc. Ant. Fr.* 1918, pp. 120–122, A. HÉRON DE VILLEFOSSE publishes a note of J. Formigé pointing out that rafts resting on inflated skins were much used by the Romans especially in the navigation of the rivers of Gaul. The skins were intended to protect the raft from shock when striking against rocks or the shore, and not primarily for buoyancy.

The Industrial Geography of the Lower Loire.—In *R. Arch.*, fifth series, IX, 1919, pp. 234–273 (3 figs.), LÉON MAITRE describes and discusses in considerable detail the numerous traces of ancient (chiefly or altogether Roman) mining operations in the region of the lower Loire. They consist of mines, forges, fortified places for habitation or refuge, and various utensils.

SWITZERLAND

Notes on Antiquities in the Museum of Art and History at Geneva.—In *R. Arch.*, fifth series, IX, 1919, pp. 98–142 (30 figs.) is a series of notes by W. DEONNA supplementing the catalogue of the Greek and Roman sculptures. The numerous objects described include statuary and reliefs of marble, bronzes, and terracottas. In connection with some sarcophagi the author discusses the solar significance of the so-called *clipeus*. He also maintains that the arms often represented on sarcophagi were intended to protect the deceased against

perils after death. The chthonic origin and significance of the bust form is also asserted.

NORTHERN AFRICA

Questions of Carthaginian Topography.—In *R. Arch.*, fifth series, IX, 1919, pp. 277–337 (10 figs.), L. CARTON discusses various questions of Carthaginian topography, dividing his discussion under the following heads:—Exploration (giving the reasons for his confidence in his own conclusions), The Site (especially the changes wrought by natural causes), The Primitive Citadel (early walls on the peninsula), The City (at Bordj Djedid), Great Carthage (the encircling fortifications, the suburbs of Megara, and the harbors). Under each head many details are discussed. The views of Gsell, when they are accepted, are not discussed, but any views of Gsell or others which are not accepted are controverted by the evidence of existing remains and by argument.

The Neo-Punic Inscription of Bir-Tlelsa.—In *R. Arch.*, fifth series, IX, 1919, pp. 179–182, CH. BRUSTON reprints and discusses the neo-Punic inscription from Bir-Tlelsa, hitherto best published by Dussaud (*B. Arch. C. T.* 1914, p. 619). New interpretations are in line 3, “the altar of the victims with which (is) the wheat of the cake which (is) in the name of Melkarth,” and slightly later, “likewise Akanaksalim (or Akanaksilam), son of Arim, has renewed and consecrated it with them.”

The Date of the *Thermae Aestivales* at Thuburbo.—In *B. Soc. Ant. Fr.* 1917, pp. 202–203, A. MERLIN shows that the dedicatory inscription from the *thermae aestivales* at Thuburbo proves that they were finished in the year 361 by a certain Annius Namptoius *jurisconsultus, magister studiorum, i.e.* a professor of law.

The Vicarius in Africa.—In several Latin inscriptions found at different sites in Northern Africa mention is made of an official referred to as *agens pro praefectis*, or *agens vice praefectorum praetorio*, otherwise known as *vicarius*. In *B. Soc. Ant. Fr.* 1917, pp. 205–211, C. PALLU DE LESSERT shows that he had a position inferior to the proconsul. There was clearly a division in authority between these two officials, but the duties which belonged to each have not yet been determined.

The Epitaph of a Christian Soldier.—In *C. R. Acad. Insc.* 1919, pp. 142–149, P. MONCEAUX publishes a Latin epitaph of a soldier found at Mdaourouch (Madaura) in 1918. It is interesting for its date (the fourth century A.D.), and for the emphasis laid on the man's belief in the Catholic faith. He is described as *Cat(h)olic(a)e Legi f(i)delissima mente inserviens*.

EARLY CHRISTIAN, BYZANTINE AND MEDIAEVAL ART

GENERAL AND MISCELLANEOUS

The Life of Saint Augustine.—HERBERT T. WEISKOTTEN has published as his doctor's dissertation at Princeton an edition of the *Sancti Augustini Vita* by Possidius. After an introduction, in which he includes an account of the manuscripts, the writer gives the Latin text and a translation of the *Life* on

alternate pages accompanied by a full critical apparatus. At the conclusion twenty-two pages of explanatory notes are added. [*Sancti Augustini Vita scripta a Possidio Episcopo*. By HERBERT T. WEISKOTTEN. Princeton, 1919, University Press. 174 pp.; map.]

The Christian Monuments of Salonica.—In *R. Arch.*, fifth series, IX, 1919, pp. 1-36 (8 figs.), LOUIS BRÉHIER reviews a recent great work on the churches of Salonica and their adornment (Ch. Diehl, M. Le Tourneau, H. Saladin, *Les monuments chrétiens de Salonique*. Paris, 1918, E. Leroux). This work is of especial importance now that the church of St. Demetrius has been almost completely destroyed. The admirable mosaics of this church, remarkable for their realism, expressiveness, and picturesque details, were discovered in 1907 under a coating of paint and are now preserved in the excellent photographs and watercolors made by Le Tourneau and published in the book under discussion and the accompanying album. In the review, as in the book, other churches of Salonica are described and the importance of the city as a centre of art and civilization is emphasized.

The Eulalios Problem.—In *Rep. f. Kunstw.* XXXIX, 1916, pp. 97-117, 231-251 and XL, 1917, pp. 59-71, 185, N. A. BEES investigates the problem of the connection of the artist Eulalios with the mosaic decoration of the church of the Apostles at Constantinople. A description of the mosaics of the destroyed church is given by Constantine Rhodius (tenth century) and another by Nicolaus Messarites (end of the twelfth and beginning of the thirteenth century). Neither of these mentions the author of the mosaics, though opposite the passage in which Messarites says that among the guards of Christ's grave the famous wall-painter represented himself, a copyist or reader has written "Eulalios" as the name of the famous artist. It has been contended by various historians that Eulalios, who is known also from other literary references, carried out the mosaic decoration either in the time of Justinian or at least before the period in which Constantine Rhodius wrote. The present study argues that both these datings are incorrect. Nicephorus Callistus Xanthopoulos (thirteenth to fourteenth century) not only mentions definitely one composition in the church of the Apostles—the Pantocrator—as the work of Eulalios, but also writes of a work by him which was apparently executed for the Archangel Cloister founded by Emperor Manuel Comnenus (1143-1180); and Theodorus Prodromos mentions another which was done for the cloister founded by Johannes Comnenus. The latter cloister, in which Eulalios worked, was completely built in the twelfth century, so that Eulalios must naturally have been a twelfth century artist. This conclusion is further substantiated by the discrepancy that exists between the accounts by Rhodius and Messarites. To be sure, both accounts, as they have come down to us, are somewhat fragmentary. But they are sufficiently complete to show that the later writer is describing a new arrangement: he describes some compositions in quite a different way from that in which Rhodius describes the same subjects, and he includes some things that were clearly not in the church when the earlier narrator wrote. Heisenberg's assertion that the Eulalios mosaics must belong to the sixth century because in the posticonoclastic period self-portraits of the artist are unthinkable in religious pictures in church decorations is disproved by numerous examples. The conclusion, then, is that the mosaic decorations of the church of the Apostles were restored,

changed, and added to in the twelfth century and that Messarites was probably called upon by the Patriarch Johannes Camateros—presumably with the purpose of drawing more pilgrims to the church—to describe their splendid appearance. The only compositions in the church that can be documentarily assigned to Eulalios are the Pantocrator and the Women at the Grave. But others, from the description of Messarites, can be very definitely attributed to him.

Early Byzantine Silk-weaving.—A discussion of the origin of the drawloom used in making early Byzantine silks is given by J. F. FLANAGAN in *Burl. Mag.* XXXV, 1919, pp. 167-172 (pl.; 7 figs.). The invention of this device, which was as important for the weaver's art as was the printing press for the printer's art, has generally been believed to have been made by Chinese weavers and passed to the West by Sassanian Persians. However, there is not sufficient ground for this belief; while in Egypt during the fifth century, which immediately preceded the time in which the early Byzantine silks are believed to have been produced, there is plenty of evidence that the drawloom principle was known and used for a weave very similar to that of the early Byzantine silks; examples in linen and wool have been found in Egyptian tombs. It would seem, then, that the tradition was carried from West to East rather than from East to West.



FIGURE 2.—CHRIST ENTHRONED:
ST. SERVIN, TOULOUSE.

The Sources of Romanesque Sculpture.—The importance of the study of illumination for the understanding of mediaeval styles of sculpture is shown by C. R. MOREY in *Art Bulletin*, II, 1919, pp. 10-16 (10 figs.), where he traces the influence of manuscript illumination upon the first two phases of Romanesque sculpture. The first of these phases is the primitive (first quarter of the twelfth century), which manifests itself in the early works of Burgundy and the valley of the Loire and is best known in its Italian variant, under the name of Lombard.

The second is the baroque (second third of the twelfth century), the prevailing styles of which are those of Languedoc and Burgundy. The principal alternative theory for the source of Romanesque sculpture would derive it from ivory carving. But aside from the fact that important characteristics of the sculpture are not found in the ivories, these ivories themselves are manifestly derived from miniatures. A most obvious illustration of this derivation is furnished by a comparison of a plaque at Zurich with the illustration of Psalm XXVII in the Utrecht Psalter: the ivory is an abbreviated replica of the Utrecht drawing. One of the most distinguishing features of the sculpture, that is lacking in the ivories, is the use of double lines which divide the drapery



FIGURE 3.—SAINT MARK FROM A CAROLINGIAN MANUSCRIPT.



FIGURE 4.—ILLUMINATION IN THE CODEx EGBERTI.

into overlapping folds, as in the Christ on the choir screen of St. Sernin at Toulouse (Fig. 2). This feature does appear, however, in illuminations; a good example is the evangelist Mark in a late Carolingian manuscript of the school of Tours (Fig. 3). This figure also illustrates many of the eccentricities that are taken over both by ivories and by sculpture in its second Romanesque phase: the undulating hair, whirling draperies, distorted body, etc. Another clear illustration of the derivation of this style from the linear manuscript style of France and England is seen in the comparison of the prophet of Souillac with the angel locking the gate of Hell in the *Liber Vitae*. The source of the Lombard style of sculpture, which, in contrast to the linear style of Languedoc and Burgundy, is plastic in quality, is to be sought in the manuscript illumination which developed in the valley of the Rhine. Its peculiarities—lack of



FIGURE 5.—GROUP FROM THE CATHEDRAL: MODENA.

movement, flatness of planes, and heaviness of proportions—result from its attempt to follow proto-Byzantine models. The Codex Egberti gives a good example of this style (Fig. 4), which we see taken over in such sculpture as that representing the story of Genesis in Modena Cathedral (Fig. 5).

A Coptic Pyxis.—In *Mh. f. Kunstw.* XII, 1919, pp. 81–87 (6 figs.), S. POGLAYEN-NEUWALL writes on a Coptic pyxis in the Morgan collection at the Victoria and Albert Museum. Its special interest lies in its subject, the representation of the Women at the Tomb. An iconographical study places the piece in a group of pyxes of Egyptian origin related to diptychs and ampulae, already known, in which narrative and formal characteristics balance each other. The stylistic treatment dates the work in the sixth or seventh century.

The Bornholm Fortress-Churches.—Churches erected in the twelfth and thirteenth centuries on the Danish rock island of Bornholm are described by W. BOMBE in *Mh. f. Kunstw.* IX, 1916, pp. 92–102 (3 pls.). Their peculiar plan was probably determined in large part by the fact that they were frequently called upon to serve as places of defence as well as churches. They are built of rough stones and have, in some cases, interesting frêscô decorations. The Nylars church, dedicated to St. Nicholas, is in execution the finest. The plan of this church coincides in general with that of the others on the island. It is a large, round, three-storied building, with an oval choir terminating in a semi-circular apse, a later weapon-house, and a separate bell-tower. In the centre of the interior of the first story is a round pillar with simple base and cornice. Similar pillars are in the second and third stories. The frescoes in

this church are among the earliest in the churches of the island, probably dating from the first half of the thirteenth century. The figures are quite Byzantine in style, though naïve attempts to vary their expressions are evident. The outside influences were probably brought by wandering monks.

ITALY

S. Antonino at Piacenza.—The numerous vicissitudes of the famous basilica of S. Antonino at Piacenza are traced by G. U. ARATA in *Rass. d'Arte*, XIX, 1919, pp. 37–68 (47 figs.). Though the history of the original church begins much earlier, the oldest parts of what stands today date from 1014, when the church was consecrated, after a rebuilding, under the bishop Sigifredo (997–1031?). To this period belongs the fundamental plan of the church, which has not been essentially altered in spite of the later additions and mutilations which have quite changed the general appearance. This plan is the most interesting feature of the church. The construction of the lantern tower is placed upon eight columns, situated between the piers at the four angles. While these columns repeat the octagonal shape of the upper part of the tower, the arrangement has the disadvantage of obstructing the opening of the central nave and the whole crossing of the transept, over which the tower rises. All the weight, then, rests on the eight columns, relieving the piers at the angles of their function of support. Lantern towers beyond the Alps, as well as in Italy, that show closest likeness to this one, as, *e.g.*, those at Issoire (Puy-de-Dôme), Orgeval (Seine-et-Oise), and Chiaravalle (Lombardy), have only the four piers. The interior of the church of S. Antonino, as well as the exterior, was for a long time left with little decoration. In the thirteenth century the north façade of the transept was changed. The elaborately worked portal gives evidence of the participation of Piacenza at this time in the important sculptural development that was taking place in Emilia. The stylistic affinity between the doors of the cathedrals of Ferrara, Modena, Verona, Lodi, and this one at Piacenza is quite clear. There is not, of course, the same interest in the paintings of the church. For, while Romanesque sculpture was in the midst of an important evolution at this time, painting was clinging close to the old Byzantine traditions, and the few remains of paintings in the interior of S. Antonino indicate that there was once here just the same arrangement of compositions and the same type of figures that are to be found not only in Emilia, but also in such a church as S. Maria in Cosmedin at Rome. To the fourteenth century belongs the addition of the vestibule, called the “Paradiso,” designed and carried out by the architect, Vincenzo Vago, in 1349–50. From this time forward there were many changes in the church, but they are *ritardato* degenerations, based on fourteenth century style, and baroque extravagances. Finally, in the middle of the nineteenth century the interior suffered a complete devastation, when a false and odious pseudo-Gothic decoration was applied. The prototype of the church offers, in its unusual plan, an interesting problem. That it should have come either from Germany or France is out of the question, for churches in these countries that show closest parallels belong to a later period, and besides, as has already been pointed out, the plan at the base of the tower is entirely unique.

The Abbey of S. Angelo at Raparo.—In *Boll. Arte*, XIII, 1919, pp. 57–59 (pl.), G. PALADINO describes the traces of the activities of Byzantine monks

at Raparo in Basilicata in Southern Italy. A cave, with beautiful stalactite formations gives access to a number of cells cut out of the tufa, which, from a painting visible on one of the walls, are shown to have been inhabited by monks of the order of St. Basil. The painting represents a monk in the robe of that order kneeling before St. Michael. The appearance of the cells and of the painting points to the eleventh century as the period of their origin. Above the cave rise the ruins of the church of S. Angelo (Fig. 6). It is Byzantine in form, but no analogous combinations of a single nave with barrel vault without double arches and with a central cupola are found except in some rural chapels of the Morea. The frescoes that once covered the walls have disappeared almost entirely. The few traces of figures of saints that remain permit the attribution of the work to the monastic Byzantine school of the fourteenth or



FIGURE 6.—CHURCH OF SANT' ANGELO: RAPARO.

fifteenth century. To the same period belong two panels representing St. Peter and St. Paul, which have been removed to the cathedral of S. Chirico, and also an altar pala conserved in this church.

The "Maestro di S. Francesco."—In *Rass. d'Arte*, XIX, 1919, pp. 9-21 (18 figs.), R. VAN MARLE contributes to the knowledge of the artistic personality christened by Thode on the grounds of a portrait of St. Francis in S. Maria degli Angeli in Assisi the "Maestro di S. Francesco." But the author of this painting has been constantly confused with others, particularly with Giunta Pisano. A careful study of the characteristics of the St. Francis master as evinced in the portrait of St. Francis leads to the attribution to him of a number of other works, most important among them: the Crucifixion (which offers good material for comparison with Giunta Pisano's Crucifixion in Pisa), Descent from the Cross, Deposition, St. Anthony of Padua, St. Francis, and St. John the Evangelist—all in the Perugia gallery—and especially the early frescoes in the Lower Church of St. Francis at Assisi. These mutilated frescoes,

which from the time of Vasari have always been attributed to at least two different hands, all show the characteristics of the master under discussion and must have been done by him and his assistants. The "Maestro di S. Francesco" apparently derives from the Pisan school (not from that of Urbino, as Thode thinks); he is following the Byzantine tradition in his solemn, elongated figures, but he evinces a strong individuality and an unusual ability for realistic, human representation of dramatic motives.

SPAIN

S. Maria de Naranco.—The building of Naranco at Oviedo in Spain has for a long time been explained as a church erected in 848 by Ramiro I in honor of the Virgin Mary. But when one interprets the inscription of that year correctly and examines the plan of the building as it is without the later additions, it becomes evident that it was not a church at all, but that we have here a fine example of the old halls of the kings sung in Beowulf and elsewhere. It was probably built in the middle of the eighth century as the first building of the newly strengthened kingly power of the West Goths, perhaps under Alfonso I (739–757). After a cycle of nearly a thousand years, at the end of the sixteenth century, the famous Neues Lusthaus, built by the Duke of Württemberg, presents again the old type of Germanic king's hall. It is true in nearly every detail to the scheme that we find in Naranco. (A. HAUPT, *Mh. f. Kunstw.* IX, 1916, pp. 242–263; 3 pls.)

FRANCE

A Manual of French Archaeology.—M. CAMILLE ENLART has issued the first volume of a new and revised edition of his *Manuel d'archéologie française*. The increase in the amount of material available has been so great since the work appeared fifteen years ago that the author has found it necessary to enlarge the first part, which is devoted to *Architecture religieuse*, to two volumes. In the present volume there is a full bibliography given, and then follows a discussion of definitions and principles, the Latin and Merovingian period, the Carolingian period, old Merovingian and Carolingian baptisteries, and finally the Romanesque period. The author's plan is to produce eventually a sort of encyclopaedia of what might be called the plastic arts of the Middle Ages. [*Manuel d'archéologie française depuis les temps mérovingiens jusqu'à la renaissance. I. Architecture religieuse. Première partie: Périodes mérovingienne, carolingienne et romane. Par CAMILLE ENLART. Paris, 1919, A. Picard. cviii, 458 pp.; 225 figs. 8vo. 18 fr.*]

Manuscripts with Miniatures at St. Gall.—In *R. Arch.*, fifth series, IX, 1919, pp. 225–233 (4 pls.), JEAN EBERSOLT publishes nine miniatures contained in manuscripts (Nos. 338, 340, 341, and 376) of the tenth and eleventh centuries in the monastery of St. Gall. They represent scenes of the evangelistic cycle. Some of them are Byzantine in type, while others show the influence of Syrian and Palestinian models, an influence which doubtless reached St. Gall through Italy. The direct intercourse between Germany and Constantinople in the tenth century is well known. St. Gall was a centre of Byzantine culture, which doubtless exercised influence in the Rhine country.

A Merovingian Lamp.—In *R. Arch.*, fifth series, IX, 1919, pp. 274–276 (3 figs.) LÉON DE VESLY publishes a stone lamp formerly in the collection of the

late M. Goujon at Notre-Dame du Vaudreuil. It is said to have been found on the site of the palace of Queen Fredigonde at Vaudreuil and is attributed to the seventh century. The lamp is open, consisting of a basin (external diameter 0.06 m., internal diameter 0.039 m.) and a channel (0.012 m. long) for the wick. The decoration of the edges consists of triangular cuttings interrupted by three imitations of ligatures or fastenings, so placed as to suggest a cross.

The Monuments of the Popes at Avignon.—In *Mh. f. Kunstw.* XI, 1918, pp. 145–171 (7 pls.), E. STEINMANN writes on the destruction of the grave monuments of the popes at Avignon. It is only from documents, engravings, and a few remains that we can get any idea of their original splendor.

BELGIUM AND HOLLAND

Some Enamels of the School of Godefroid de Claire.—Using, in a large measure, the characteristics which have been established by v. Falke and Frauberger for the work of Godefroid de Claire, H. P. MITCHELL assigns a number of important pieces of enamel to this master and to his school (*Burl. Mag.* XXXIV, 1919, pp. 85–92, 165–171, and XXXV, 1919, pp. 34–40, 92–102, 217–221; 11 pls.; 2 figs.). The work on the Stavelot triptych, in the collection of Mr. J. P. Morgan, New York, which is a well-attributed work of Godefroid's early period, serves as principal touchstone. The twelfth century altar cross in the Victoria and Albert Museum shows so much divergence from the Stavelot triptych and so much variety in itself as to place it as a school piece rather than as by Godefroid himself. But a beautiful altar cross in the British Museum, decorated, like the example in the Victoria and Albert Museum, with Old Testament types of the Crucifixion, shows the handiwork of the master, not of pupils. If 1150 is taken as the date of the Stavelot triptych, the cross may reasonably be dated about 1155. Still further development of style is evinced by three plaques, in charge of the trustees of the late Lord Llangatlock, representing Alexander the Great's celestial journey, Samson and the lion, and a man riding on a camel, and also by two others, in the collection of the late M. Martin Leroy, Paris, which apparently belong to the same series and which represent a centaur hunting and a man killing a dragon. It is believed that these may have been associated with the double plaque in the British Museum, which portrays the Bishop Henry of Blois and censuring angels, in forming the decoration of the structure supporting a shrine, probably the shrine of St. Swithun. The style of the work, together with the known history of Henry of Blois, would date these enamels about 1160–65. They are very clearly from Godefroid's own hand and were probably executed in England.

GERMANY

The Abbey Church in Berchtesgaden.—In *Mh. f. Kunstw.* XI, 1918, pp. 321–340 (4 pls.), R. WEST publishes a study of the Romanesque cloisters of the abbey church in Berchtesgaden. Many styles can be studied in the church today: Romanesque, early Gothic, late Gothic, Renaissance, Baroque, and modern. It is the earlier work that is here studied, the first two periods of building. These fall in the early twelfth and late twelfth century. To the earlier period, 1125–1139, when Eberwein was provost, may be assigned

some extant parts of the cloisters and some of the sculptured animal decorations. Italian sculptors were probably brought for the latter work. The influence of the Freising crypt, which in turn felt strongly North Italian influence, is seen in the remains from the late twelfth and early thirteenth centuries in the cloisters.

Baptismal Fonts of Schleswig.—In *Mh. f. Kunstw.* XII, 1919, pp. 113-124 (11 figs.), K. FREYER distinguishes three types of stone relief work of about 1200 in Schleswig which throw much light upon early Teutonic art and character. These three are not to be distinguished as regards provenance and dating; they are just three tendencies, and two or more may be shown on a single monument. The first is designated as primitive, the individual figures being treated in a very formal manner and without relationship to each other. The second is Christian; here there is more interplay of figures and they are given a gentle movement. The third is most interesting. It is the Germanic type; while the symbolism of the subjects represented is Christian, the whole spirit is Germanic. A firm will, but an equally unbending fatalism, speaks in all the work of this class. It was the second, the Christian, which was developed in the Middle Ages; the third type gradually died out.

RENAISSANCE ART

GENERAL AND MISCELLANEOUS

Mythology and Ancient History in Italian Paintings of the Renaissance.—In *R. Arch.*, fifth series, IX, 1919, pp. 173-178, ROBERT C. WITT supplements the list given by Reinach (see *A. J. A.* XIX, 1915, p. 494) of subjects from mythology and ancient history represented in Italian paintings prior to 1580. The supplementary list includes pictures which are classified under twenty-three of the chief headings of Reinach's list.

Ancient Subjects in Tapestry.—In *R. Arch.*, fifth series, IX, 1919, pp. 48-63, L. ROBLOT-DELONDRE continues (see *A. J. A.* XXII, 1918, pp. 226 f.; XXIII, 1919, p. 195) his list of ancient subjects represented in tapestries. In this instalment are included Triumphs, Honors, various allegorical figures, festivals, combats, five pieces entitled Poesies, a series called *Fructus Belli*, grotesques or playing children, Months, Seasons, and several metamorphoses. These are Flemish and Italian works, chiefly of the last part of the fifteenth or the early part of the sixteenth century.

Renaissance Influence in Northern Architecture.—Under the title *Studier i Nordisk Renässanskonst. 2. Östeuropeiska Stildrag i Nordisk Renässansarkitektur* (*Skrifter utgifna af Kungl. Humanistiska Vetenskaps-Samfundet i Uppsala*, 18, 2. Upsala, 1917, Akad. Bokhandeln. 167 pp.; 8 pls.; 60 figs.) AUGUST HAHR shows how the influence of the renaissance passed from Northern Italy through the Tyrol, Austria, Hungary, Bohemia, Poland, and Northern Germany into Sweden. Sigismund I and Bona Sforza invited Italian architects to Cracow in the sixteenth century and their work had an important bearing not only upon the development of architecture in Poland, but as far as Sweden. The arcaded court in the castle at Cracow was something new and was imitated freely. Arcades were used for decorative effect even in private houses. Renaissance influence is also to be seen in the treatment of

the roof, the use of battlements, and the employment of painted stucco for interior decoration. Porcelain tiles made in Poland, Bohemia, Silesia, and Austria imported into Sweden contributed to the same end, as did weapons and textiles. In the second part of his work he makes a special study of the arcades in the castle at Brieg.

The Arconati-Visconti Gift to the Louvre.—In *R. Arch.*, fifth series, IX, 1919, pp. 397–400 (from the *Débats*, April 15, 1919), ANDRÉ MICHEL briefly describes the gift of the Marquise Arconati-Visconti to the Louvre. The donation was signed in March, 1914, but could not be accepted until November 16, 1916. It was first exhibited April 14, 1919. Among other things the collection contains the tondo “The Infant Jesus and John the Baptist,” by Desiderio da Settignano; two “pages” in stone, by Antonio Rizzo; several other interesting pieces of Italian and French sculpture; and a number of important paintings, including the portrait of Bianca Maria Sforza, probably by Ambrogio de Predis; two portraits, doubtless by Bastiano Mainardi; a Madonna, probably by Botticini; another by Luini; a young woman, by Jacob van Utrecht; an annunciation by Bartholomeus Zeitblom; and several interesting portraits. The furniture, wood carvings, ivories, enamels, and other objects in the collection are of great beauty and interest. An illustrated catalogue, by G. Migeon and J. Marquet de Vasselot is published by Hachette (Paris, 1917).

ITALY

Early Italian Pictures.—In *Art in America*, VII, 1919, pp. 189–198 and VIII, 1919, pp. 7–14 (8 figs.), R. OFFNER continues his discussion of Italian paintings at the New York Historical Society and elsewhere. Two Crucifixions belonging to the Society are attributed, one to the school of Duccio—Berenson had suggested that it was by an imitator of “Ugolino Lorenzetti,”—the other to Giovanni da Milano. The former is to be dated soon after 1311 and the latter about 1360. A badly worn little triptych representing the Madonna and Saints is shown to be by “Ugolino Lorenzetti” and to belong to the decade between 1340 and 1350. Two trefoils, with saints, serving originally as polyptych gables, have been attributed to Giotto, but Mariotto di Nardo is undoubtedly their author, while they must be dated about 1400. Their closest relationship is to the saints on the frame of the Mariotto altarpiece formerly at the Hatton Garden Church in London. A Florentine birthplate dated 1428, with a representation of the Birth of the Baptist as principal scene, defies definite attribution. But its painter felt the influence of both Masaccio and Uccello. The *stemmi* on the reverse have not been identified. A second birthplate, however, with the Triumph of Fame as principal subject (Fig. 7), has the *stemmi* of the Medici and Tornabuoni and was no doubt painted to commemorate the birth of Lorenzo the Magnificent. The older attributions to Piero della Francesca and to the school of Domenico Veneziano cannot be sustained. The painter was as much indebted to Uccello as to either of these masters. Finally, a small Virgin belonging to Dr. Coomaraswamy is a product of the workshop of the Gerini. The Virgin must be by Niccolò di Pietro Gerini himself; the rest of the picture, the saints and angels at the sides, betray the timid hand of an assistant. The date is uncertain, but probably lies between 1375 and 1390.

The Lady with the Ermine.—Some new evidence is given by H. OCHENKOWSKI in *Burl. Mag.* XXXIV, 1919, pp. 186–194 (2 pls.) for the theory that the Lady with the Ermine in the Czartoryski Gallery, Cracow, is by Leonardo and represents Ludovico il Moro's mistress, Cecilia Gallerani. The animal that occurs in the picture, which is not a weasel as some have thought but an ermine, is a symbol which a note in a Leonardo manuscript indicates as having been connected with Ludovico; hence its appropriateness here. It seems possible to recognize in La Belle Ferronière a portrait of Cecilia by Boltraffio and for the head of the Virgin from the Adoration of the Magi and the head of the angel in Turin the same model seems to have been used by Leonardo. Comparison of the technique of the painting in the Czartoryski picture with



FIGURE 7.—TRIUMPH OF FAME: NEW YORK HISTORICAL SOCIETY.
(*Art in America*)

that in works by Ambrogio de Predis indicates that the latter was Leonardo's assistant in the painting of the Gallerani portrait. The work is to be dated about 1484. For reasons which are similar in a few points to those here given E. MÖLLER in *Mh. f. Kunstw.* IX, 1916, pp. 313–326 (2 pls.) supports the attribution to Leonardo and the identification of the subject as Cecilia Gallerani. The accurate modelling of the hand and of the ermine are two important points in favor of Leonardo's authorship.

Two More Pictures of the Mona Lisa.—In *Mh. f. Kunstw.* XI, 1918, pp. 1–14 (4 pls.) E. MÖLLER develops his theory that we have in the Leonardesque drawing of a woman's head in the Uffizi and in Leonardo's cartoon of St. Anne representations of the Mona Lisa. It seems highly probable that the Uffizi drawing, which is clearly a study from nature, was done by Salai in

Leonardo's studio in about 1505 while the Mona Lisa was sitting to Leonardo. This drawing settles certain disputes as to Leonardo's portrait: it proves that the latter is not a creation of the artist's brain but is a faithful portrait and that the sitter *did not* have eyebrows. When the same subject is recognized in the representation of the Virgin in the St. Anne drawing, we have sufficient proof that this cartoon belongs to Leonardo's Florentine period, to about 1503, when he began the work on the portrait. We are further led to the conclusion that Leonardo arrived at a new ideal of the Madonna through the Mona Lisa.

Leonardo's School at Milan.—In *Mh. f. Kunstw.* XII, 1919, pp. 257–278 (18 figs.), W. SUIDA studies the pupils of Leonardo in Milan. The names of some of these are unknown and they can only be referred to as painters of certain works which show distinctive characteristics. Around these can be grouped other paintings obviously by the same hands, so that quite a definite group of artists following the leadership of Leonardo is described. Among these are, besides Ambrogio de Predis: Francesco Napoletano, Vincenzo Civerchio, Bernardino de'Conti, the painter of the Pala Sforzesca, the painter of the Circumcision of Christ of 1491, the painter of the Seminario picture in Venice, and the painter of S. Eufemia.

Leonardo as an Anatomist.—In *Burl. Mag.* XXXIV, 1919, pp. 194–203 (3 pls.), W. WRIGHT comments on Leonardo's researches in anatomy and traces the history of his manuscripts dealing with the subject. Though he was kept from making important discoveries in anatomy because he did not overcome the two ancient misconceptions regarding the contents of the arteries and the circulation of the blood, he could have afforded much assistance to later students had his work been known; for his methods were in almost every way thoroughly modern. Not only were his observations, as recorded in his drawings, marvelously accurate, but he made much use of comparative anatomy and other important avenues of research.

Leonardo da Vinci in France.—In commemoration of the centennial of Leonardo's death P. GAUTHIEZ in *Gaz. B.-A.* XV, 1919, pp. 113–128 (pl.; 5 figs.) writes on the last years of the artist, which were spent in France. Leonardo's home here, the Chateau of Cloux or the modern Clos-Lucé, is described and reproduced, and one is enabled to grasp something of the fitness of his quiet life in these picturesque surroundings. His last years were spent largely in planning such improvements for the surrounding country as a great canal and in designing decorations for important royal festivities. Not the least important result of the great artist's sojourn and demise in France was the inheritance by that country of the Mona Lisa, which Leonardo brought with him when he came from Italy.

The Last Days of Leonardo da Vinci.—In the *Journal des Débats*, May 3, 1919 (reprinted *R. Arch.* IX, 1919, pp. 408–411), ANDRÉ MICHEL corrects some statements of Eugène Müntz and some current misconceptions relating to the last days of Leonardo at Amboise in Touraine; for instance, Francis I was not present, but was at Saint-Germain.

The Sistine Ceiling.—In *Mh. f. Kunstw.* XII, 1919, pp. 1–7 (9 figs.), J. GANTNER discusses the development of Michelangelo's plan for the Sistine ceiling decoration with the conclusion that the sketch of the plan belonging to Emile Wauters, Paris, is later than that in the British Museum and that Wölfflin's explanation of the discrepancy between the parts of the decoration is

the correct one, viz., that the three Noah scenes are the fragment of an older project, which was given up when the scale of the figures proved itself insufficient.

Pictures of Vittoria Colonna.—In *Mh. f. Kunstw.* X, 1917, pp. 381-384 (2 pls.), E. SCHAEFFER writes on extant portraits of the famous Vittoria Colonna, Marchesa di Pescara. These consist of medals, a crudely worked wood engraving from the 1540 Venetian publication of the *Rime della Diva Vittoria Colonna de Pescara*, and a painting by Altissimo, which is a copy of a picture, now lost, that once hung in the museum of Paolo Giovio at Como. The characteristics of the poetess portrayed in these portraits are found also in a picture of a seated woman in the painting gallery of the Palazzo Spada at Rome, where it is attributed to Giorgione! Since the history of the picture is not known to the author of the article, no definite conclusions can be arrived at, but it seems possible that this may be a representation of Vittoria by a sixteenth century artist of the Roman school.

The "Madonna Sacchetti."—The little known painting of the Madonna and Saints formerly in the Villa Isola, owned by Colonel Sacchetti is published by W. BIEHL in *Mh. f. Kunstw.* IX, 1916, pp. 237-241 (pl.). It has been attributed to Fra Bartolommeo, and its relationship to authentic works by that master in the period 1509-12 is so close that it must have been painted at about this time in his studio and under his supervision. Certain weaknesses indicate the hands of assistants and pupils, however. The technique and the types of figures point to Albertinelli, while the architectural setting may have been put in by Fra Paolino.

Francesco di Giorgio.—Further study of the Siennese master, Francesco di Giorgio, by P. SCHUBRING in *Mh. f. Kunstw.* IX, 1916, pp. 81-91 (5 pls.) indicates that rather than estimating the artist too highly, earlier writers have not fully appreciated his worth. In versatility he is to be compared to Alberti and Leonardo. He has left wide proof of his appreciation of the antique, of his work in painting, sculpture, and bronze-casting, and of his studies in architecture. He was most able in the field of sculpture, as is evidenced by the fact that some of his reliefs have been attributed to such artists as Verrocchio and Leonardo. Additional proof is here given for the attribution to Francesco of four much disputed bronze and stucco reliefs, the peace tablet in S. Maria del Carmine in Venice, the Flagellation in Perugia, the so-called Discord in London, and the Judgment of Paris in the Dreyfuss collection in Paris. These reliefs show distinctive Siennese characteristics and some of them offer striking parallels in architectural setting to paintings by Francesco.

Francesco di Giorgio.—In *Z. Bild. K.* XXVIII, 1916-17, pp. 63-69 (7 figs.), G. F. HARTLAUB discusses Francesco di Giorgio as a painter (his sculptural work will be dealt with in a later number). The artist has hitherto been rated too low in this branch of his activity. He did not, as Milanese tells us, give up painting entirely as early as 1476; he is still called a painter in 1502. The contrast between Siennese painting and sculpture in general does, to be sure, hold good in his case, i. e., his paintings are less advanced than his sculptures, they cling closer to the traditional Siennese style. But he also makes himself at home in the art outside of Siena. The influence of the Umbrians, is clearly seen in some of his paintings. And certain relationships to Botticelli and Leonardo lead one to suspect that he visited Florence, probably about 1472.

Eusebio da San Giorgio.—The publication of documents left by Prof. Adamo Rossi and of an original study of W. BOMBE in *Rep. f. Kunstw.* XXXIX, 1916, pp. 30–51 leads to a new conception of Eusebio da San Giorgio. Besides Raphael, he is the only important artistic personality of the school of Perugino. Since the time of Vasari he has always passed simply as a pupil of Perugino; but investigation proves that he was much more dependent upon Pinturicchio. Endowed with a lively sense of beauty, he sought to rival Raphael. He is correct in his drawing, careful in the execution of his pictures, and gives his slender, graceful figures a dreamy, melancholy expression.

Giorgio da Sebenico.—In *Mh. f. Kunstw.* IX, 1916, pp. 39–45 (2 pls.), D. FREY takes issue with H. Folnesic (see *A. J. A.* XX, 1916, p. 249) in regard to the relationship between Niccolò Fiorentino and Giorgio da Sebenico. The St. Anastasius relief of the Flagellation in the cathedral at Spalato derives from Niccolò's relief in the Kaiser Friedrich Museum in Berlin rather than *vice-versa*. Further, it seems clear that the construction of the vaulting in the cathedral of Sebenico, which makes the latter one of the most important examples of quattrocento architecture, is to be traced back to Giorgio's design, not to Niccolò's; the characteristics of the work, with its mixture of Gothic and Early Renaissance features are not Florentine but come from upper Italy, as may be seen by comparison with certain of Leonardo's architectural drawings.

Exhibition of Florentine Paintings.—In *Burl. Mag.* XXXIV, 1914, pp. 209–219 (4 pls.), C. PHILLIPS writes on the exhibition of Florentine paintings of the fourteenth and fifteenth centuries at the Burlington Fine Arts Club. The most important examples in the collection include the *Salvator Mundi* ascribed to Giotto (owned by Mrs. Jekyll), The Hunt by Uccello (Ashmolean Museum), Scene from the Legend of SS. Cosmas and Damian by Fra Angelico (National Gallery of Ireland), Virgin and Child with Saints by Pesellino (owned by Sir George Holford), and the cartoon of St. Anne and twelve other drawings by Leonardo (Royal Academy of Arts, and Windsor). While some doubt is here thrown upon the ascription of the Giotto *Salvator Mundi* and upon Capt. E. G. Spencer-Churchill's predella piece representing a miracle of SS. Cosmas and Damian, by Fra Angelico, R. FRY (*Ibid.* XXXV, 1919, pp. 3–12; 4 pls.) supports these attributions as well as certain others, *e.g.* the Glasgow Annunciation, which he thinks a fine example of Botticelli in spite of its not being mentioned in Horne's work. An appreciation is also given of Piero di Cosimo's Battle of the Centaurs and Lapiths (owned by Messrs. Ricketts and Shannon) and of Pesellino's cassone panels (owned by Lady Wantage and by the Ashmolean Museum). Another cassone panel which was included in the exhibit, a Florentine school piece, owned by Mr. Henry Harris, is published by T. BORENIUS (*Ibid.* p. 12; pl.). It represents the later part of the story of Saladin and Torello d'Istria in the next to the last novel of the *Decameron*, and is, therefore, the sequel to the panel of which Dr. De Nicola wrote some time ago (see *Burl. Mag.* XXXII, 1918, p. 169 ff.).

Andrea di Francesco Guardi.—A fifteenth century Florentine sculptor, Andrea di Francesco Guardi, whose artistic personality was first identified and characterized by Schubring (1902), is given a number of new works by P. BACCI in *Rass. d'Arte*, XIX, 1919, pp. 1–8 (15 figs.). He, with his brother and step-son and some unknown workers, is found to have been for about a decade in the service of Jacopo III d'Appiano. It was for the latter that

Andrea did the work on the Cappella di Cittadella and the adjacent cistern at Piombino. On the cistern (dated 1468?) are the portraits of Jacopo III, his son Jacopo IV, and M. Battistina di Campo Fregoso. Two important sculptures in the church of SS. Antimo e Lorenzo are also by this master. They are a relief of the Madonna and Child and a baptismal font. The latter is dated 1470 and is an especially good example of Andrea's decorative work.

The Apartment of Innocent VIII.—In *Rass. d'Arte*, XVIII, 1918, pp. 185-199 (19 figs.), G. BERNARDINI in a study of the lunettes in the apartment of Innocent VIII in the Belvedere in the Vatican shows that the common attribution of the decoration of these rooms to Pinturicchio and his pupils is not sufficiently discriminating. Most of the paintings in the rooms have disappeared, and even the lunettes are badly restored. Those in the first room, with pairs of putti at the sides of coats of arms and other emblems, show clearly the art of Pinturicchio and assistants. But in the other two rooms other influences and styles are to be seen. The hand of Raphael was employed upon at least one figure here, a putto which is now in the Gallery of S. Luca in Rome. It has been pointed out that this corresponds exactly to one of the putti in Raphael's Isaiah in S. Agostino in Rome and it has consequently been considered a pupil's copy of the Isaiah putto. But the date of its execution and especially the style of the work establish it as a genuine Raphael. The lunettes with the half figures show many points of likeness to the style of Bramante and to that of Melozzo. The best of them were probably designed by Melozzo himself, while his followers were left to do the rest.

Raphael in the Musée Napoléon.—In *Mh. f. Kunstw.* X, 1917, pp. 9-25 (3 pls.), E. STEINMANN, taking as a point of departure the large collection of paintings by Raphael that was once in the museum of Napoleon, writes on the wholesale appropriation by Napoleon of paintings from invaded territory and of the deplorable restorations that were carried out soon afterward to repair the damages incurred in shipping.

Portrait by Andrea del Castagno.—In *Art in America*, VII, 1919, pp. 227-235 (pl.), R. OFFNER writes an appreciation of Castagno's portrait of a man in the collection of Mr. J. P. Morgan (Fig. 8). The portrait is a supreme example of Castagno's absorbing motive in all his work—dynamic force in the individual. With the exception of works by Donatello and Antonello da Messina, this portrait is the most acute realization of reality in modern times.

Paolo Uccello.—In *L'Arte*, XXII, 1919, pp. 37-42 (3 figs.), M. MARANGONI points out characteristics of Uccello which make previous judgments of him untenable. That he was not influenced by Donatello or by Masaccio is shown by the fact that he is not at all interested in dramatic or realistic treatment. First and last, his studies are geometric. In his Battle piece in the Uffizi one can see the use of geometric lines and forms in faces, hats, weapons, etc. But the present investigation has to do principally with a comparison of the drawing (in the Uffizi) for the monument of the "Acuto" with the fresco of that subject in S. Maria del Fiore at Florence. References of critics—Berenson and Ferri—to this drawing have rather depreciated it and have noted in it no divergence from the fresco; but a juxtaposition of the two leads to a very different conclusion. In the drawing various outlines seem drawn with the compass rather than with the free hand. Everywhere the contour takes a geometrical shape. But in the fresco all the sharpness and crispness of contour, all the

curvilinear lines have been lost, leaving the painting with a much cruder appearance. Since one cannot credit Uccello with such marring of his original design, the blame must rest upon later restoration. When the painting is made more accessible for study than it is at present, it is expected that such restoration can be detected and removed.

A Robbia Note.—In *Rass. d'Arte*, XIX, 1919, pp. 22-32 (pl.; 11 figs.), A. FORATTI studies a few Robbia examples with a view to making a clearer distinction between the characteristics of the members of the Robbia family and

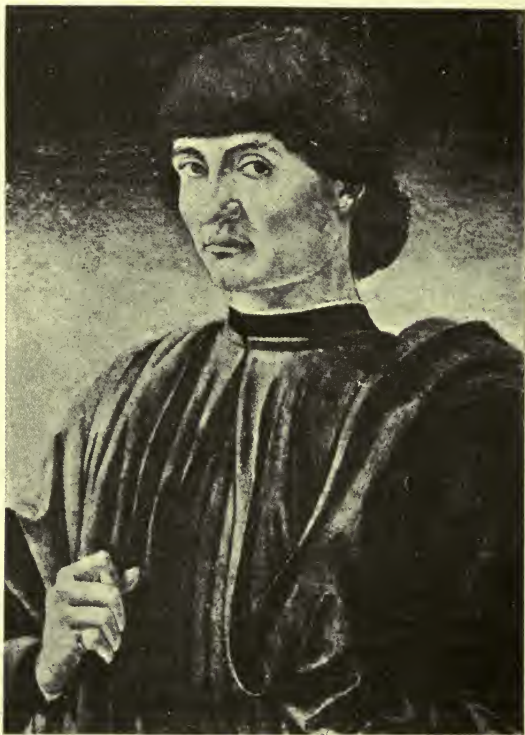


FIGURE 8.—PORTRAIT OF A MAN: CASTAGNO.
(*Art in America*)

their school. The Madonna of the Via della Scala, Florence, which is now generally attributed to Andrea, is more probably a school piece. A survey of the variations of the composition of Madonna and Child in the Pieve Collegiata, where two of the variations may be found, illustrates the fact that it was not in great variety of gestures that Luca excelled but in the fine psychological interpretation of expression. And it was just this that imitators failed to get (cf. the Madonna in the Campana collection in the Louvre, which is a bottega work). There is but little difference in composition between Luca's two little Madonnas in the Pieve Collegiata, the one formerly in Genoa and now owned by

G. Benda in Vienna, and the three replicas of the latter in the Museo Nazionale, Florence, the Kaiser Friedrich Museum, and the Simon collection at Berlin. The only work in which Andrea competes with Luca is the Madonna del Bertello in S. Gaetano at Florence. And even here, one can see how, in the attempt to introduce a mystic quality, he falls far short of the appealing impression made by Luca's simple, natural figures. In Andrea's putti three types may be distinguished: in the first he was imitating Luca, in the



FIGURE 9.—MADONNA OF THE CANDELABRA: COLLECTION DEL DRAGO, NEW YORK.
(*Art in America*)

second he followed a naturalistic tendency, and in the third his interest is manifestly in portrait-like work.

The Madonna of the Candelabra.—In *Art in America*, VII, 1919, pp. 198-206 (4 figs.), A. MARQUAND publishes a study of several stucco and terracotta repetitions of the Madonna between two candelabra. Among these is one belonging to Prince Giovanni del Drago, New York (Fig. 9), one in the Victoria and Albert Museum, London, one from the Gavet collection, Paris (1897), and one in the Berlin museum. These are not copies or casts of one original but

are slight variations from it. Certain of them have been ascribed to Desiderio da Settignano, to Mino da Fiesole, and to the Master of the Marble Madonnas, but a more correct attribution for the original designer seems to be Antonio Rossellino.

A Drawing by Pisanello.—In *L'Arte*, XXII, 1919, p. 8, M. KRASCENINNIKOVA attributes a drawing in the Vallardi collection, No. 110, to Pisanello. The drawing represents three profiles in red chalk. The careful execution of the work, the clear-cut outlines, delicate gradation of chiaroscuro, etc., bear the unmistakable stamp of Pisanello. An especially good example with which to compare this work is the drawing of an unknown man in the Capitoline Museum at Rome, formerly attributed to Giovanni Bellini, and recently, by A. Venturi, to Pisanello.

Domenico Beccafumi.—Since Beccafumi was the Siennese informant of Vasari for his *Vite* and was a close friend of his, it is unlikely that any great work by Beccafumi escaped the biographer. On the basis of the known paintings by the artist, L. DAMI, in *Boll. Arte*, XIII, 1919, pp. 9-24 (16 pls.) analyses the periods of his career. In the first period, 1509-10 to 1518, there is visible in some of his work, e.g. the Stigmatization of St. Catherine, the influence of contemporary Florentine artists, especially of Fra Bartolommeo, who has a large part in determining the types of figures, the draperies, colors, and the attitudes. But in the setting of the scene the inspiration of Perugino is seen. Sodoma and Raphael also have a share in the credit here, the former for the figure of the saint and the latter for an angel. Though he is really not interested in the third dimension, in sculptural effect, Beccafumi shows some Michelangelesque influence in this early period. In the second period, however, which falls in the years between 1518 and 1528-30, the Michelangelesque features are replaced by a Raphaelesque quality, as far as concerns the modeling of figures. But Beccafumi is so changeable and restless that one style cannot dominate him, and we are not surprised to see the Michelangelesque manner in full swing again in the later pavement of the Siena cathedral. The most characteristic feature of Beccafumi's activity is this restlessness and changeableness. He seems to have no definite purpose, no special interest in developing decorative effect, plasticity, spatial construction, or any other definite field of research. The third period (1530-1536), dominated by Raphael, is the best of his career. His decadence sets in about 1536.

S. Andrea on the Via Flaminia.—In *Boll. Arte*, XIII, 1919, pp. 27-29 (4 pls.), Q. ANGELETTI describes the neglected and abandoned but excellent example of architecture, the church of S. Andrea built by Jacopo Barozzi by order of Pope Julius III. The location of the church, on the Via Flaminia, midway between the Porta del Popolo and the Ponte Milvio, was chosen by the pope not only because it was close to his famous vineyard, but also because it was the spot on which, about a century before, Pope Pius II and his court halted when Cardinal Bessarione, returning from Ancona, brought the relics of S. Andrea. There are six pilasters on the façade, which is finished with a tympanum. Above this appears the rectangular form of the building with a cornice, and above all rises the low, round cupola, which in turn is crowned by a similar cornice. In spite of the small size of the building, the effect of the interior is of great spaciousness. The Bolognese artist, Francesco Primaticcio, perhaps with assistants, is responsible for the paintings on the walls.

Antonio Tempesta's Views of Rome.—The birdseye views of Rome drawn by Antonio Tempesta in 1593 have been published by HENRIK SCHÜCK under the auspices of the University of Uppsala as twelve fine photolithographic plates in large folio. The accompanying pamphlet contains a brief historical and bibliographical introduction and descriptions of the individual plates in Swedish. [*Arbeten Utgifna med Understöd af Vilhelm Ekmans Universitetsfond, 20:B. Antonio Tempesta's Urbis Romae Prospectus, 1593, 12 pls., large folio, and Några Anmärkingar till Antonio Tempesta's Urbis Romae Prospectus, 1593. Af HENRIK SCHÜCK, Uppsala, 1917, A.-B. Akademiska Bokhandeln; Leipzig, Harrassowitz. 28 pp. 8 vo. 16 kr.; 25 mk.]*

BELGIUM AND HOLLAND

Studies in Dutch and Flemish Miniatures.—In *Jb. Kunsth. Samm. XXXII*, 1915, pp. 279–342 (21 pls.; 56 figs.), F. WINKLER publishes a series of four studies on northern Renaissance illumination. The first concerns the Prayer Book of Charles the Bold, Imperial Library, Vienna, Cod. 1857. In this splendid manuscript, one of the treasures even of such a collection as the Viennese, the hands of seven illuminators are distinguishable. Only one of these is immediately and easily identified. Folio 51 shows unmistakably the style of W. Vrelant, and can, therefore, be dated in the third quarter of the fifteenth century. Of the other miniatures Master A and Master E had the largest share in the work. The former is wholly unidentified though his work seems the best in the book. He recalls A. Bening and, in fact, the later S. Bening, but cannot be assimilated to either. In style, although remarkably individual, he seems to belong to Bruges and to have worked in the last quarter of the fifteenth century. With Master E we come to the problem of origin more directly. Long ago Weale suggested that this was the book which the magistrate of Bruges presented to the future Charles the Bold in 1466. That manuscript was written, we are told, in gold and silver letters on black parchment as the first 35 folios of this are, though the fact would, of course, not substantiate the identification. More important is the consideration that Charles the Bold, not deeming the gift beautiful enough, did not hesitate to have it further illuminated—at the cost of the donor! The variety of hands in the Viennese manuscript accords with such a history. The court illuminator of Charles, who continued the work on the Bruges gift was Phillipe de Mazerolles. His works have never been certainly recognized but if the identification of Weale can be maintained, we must have him here as Master E, who did most of the illumination. There are some difficulties with the view: Master E did not finish the work, Master A took part later. But some work had been done before that of Master E and most of that subsequent seems to have been merely addition to an already completed whole. Moreover, various other manuscripts which can be safely ascribed to Master E are readily connected with Charles the Bold and do not date later than 1479, the date of the death of Phillipe de Mazerolles, who is thus tentatively identified with Master E, or Durrieu's Master of the Golden Fleece. The second study is devoted to the reconstitution of a local Flemish school of about 1420–1460. Its founder appears to have been an illuminator under direct Italian influence, possibly through a visit to Bologna. He is here called the Master of Guillebert de Metz because he illuminated two manuscripts written by Guillebert de Metz, the librarian of John the Fearless of

Burgundy. The first of these contains among other things, Guillebert's famous description of Paris, written in 1434. The title page is the point of departure for the reconstruction of the *oeuvre* of the miniaturist. He furnished three miniatures for the Prayer Book 10772 at Brussels; the illuminations in Augustine's *City of God*, 9005/6 in the same library; part of those for Boccaccio's *Decameron*, 5070 in the Bibliothèque de l'Arsenal, at Paris; a few for a Breviary, Harley 2897, in the British Museum; and miniatures in a Vatican Book of Hours, Ottob. 1. 2919; a Prayer Book at the University of Bologna; a Romance in the Bibliothèque Nationale, Paris, fr. 12575; and the Missal of Cardinal Hurtado de Mendoza in the Biblioteca Colombina at Seville. He is Durrieu's "Master of the Silver Skies." His most distinguished follower is here called the Master of the Privileges of Flanders and Ghent. The manuscript around which his personality is built up is 2583 of the Imperial Library at Vienna. To him may be ascribed the title miniature of Gilles de Rome's *On the Government of Princes*, Brussels Library 9043; some miniatures in the second volume of Augustine's *City of God*, 9016 in the same library; the title miniature of a translation of Valerius Maximus in the Bibliothèque Nationale, fr. 6185; a single sheet of the Musée d'Ansembourg, Liège; and possibly a drawing in the Valory sale. He was closely connected with Philip the Good, and his activity, as far as the above-mentioned works go, would fall between 1445 and 1467. He might be Jean Dreux of whom we have corresponding records but the identification remains a question. Both of these artists are clearly Flemish and show relations to the Maître de Flémalle and Jan van Eyck. There are others of less importance in the local school, the seat of which cannot be precisely located. The direct Italian influence is important. The third study throws light on the miniaturists of a Dutch Bible in two volumes, 2771/2 in the Imperial Library at Vienna. The first volume was begun by a good artist but continued by a poor one, the Master of the Bible y402 at the Hague. The second volume was likewise begun by another good artist and finished by the same poorer one with two unimportant assistants. Important for the placing of the two good miniaturists is the discovery of their work in Prayer Book 13 of the University Library, Liège. This was written about 1450 for Ghysbrecht von Brederode, bishop of Utrecht. Its calendar and litany accord with those of Utrecht and this locates the artists whose work is also found in the Viennese Bible mentioned. That a Van Eyck composition from the destroyed Turin Hours is copied in one miniature of the Prayer Book is an interesting side-light on the Utrecht school. The Brederode family was closely connected with the house of Bayern-Hennegau-Nassau for which the Turin miniature had been made. The fourth study lists the work of the Prayer Book Master, a follower of the miniaturist of the famous *Hortulus Animae*. Almost wholly by the Prayer Book Master is the Prayer Book 1862 at Vienna; number 1887 there also shows some of his work. Prayer Book 78 B. 15 at Berlin is by him, as are two single sheets, 660 and 1761, in the Print Room at the same place. Other Prayer Books to be named are one formerly in the Cardon collection at Brussels, one in the Bibliothèque Nationale, Paris, lat. 1314, one in the Escorial Library (H IIII, I) of 1645 folios, which though incomplete is the thickest Prayer Book known. He illuminated one secular manuscript, the *Romance of the Rose*, in the British Museum (Harley 4425).

The Martyrdom of St. Catherine by Rubens.—The Martyrdom scene painted by Rubens for the altar of the church of St. Catherine at Lille has in

recent times been almost forgotten because, though still in the church for which it was executed, it has been placed where it could hardly be seen. During the war it was taken down and hung in a well lighted chapel so that it was possible for it to be studied and photographed. A. FEULNER reproduces and discusses it in *Mh. f. Kunstw.* XI, 1918, pp. 269-275 (3 pls.). The underpainting was done by a pupil after Rubens' design, then gone over by the master, and it is interesting that corrections and additions made by Rubens in the final painting are clearly visible in many places.

Rubens in Italy.—In *Jb. Preuss. Kunsts.* XXXVII, 1916, pp. 262-286 (pl.; 8 figs.), R. OLDENBOURG writes on Rubens' activities in Italy during the years 1600-1608, a period of important development for the artist. Some chronological data are clarified, as, *e.g.* the visit to Genoa in 1606. Tintoretto was one of the earliest influences Rubens felt in Italy; the coloring was the principal medium of this influence. But at the same time the early manner of Titian is mirrored by the female study of the gallery at Stuttgart, in the fine treatment of the flesh and in the waving, brown hair. Raphael soon attracted the northerner's attention, and then in his interest in Michelangelo we see his tendency toward Classicism which led to his extensive archaeological investigations in Rome.

Gerard Soest.—In *Burl. Mag.* XXXV, 1919, pp. 150-155 (2 pls.), G. H. C. BAKER writes on the portrait work of the Dutch artist, Gerard Soest. Most interesting is the ascription to him of the portrait of Aubrey de Vere in the Dulwich Gallery, hitherto ascribed to Samuel Cooper. Others of his works, such as the portrait of the painter, in Dublin, and the portrait of Sir Henry Vane, in the Dulwich Gallery, have formerly been attributed to William Dobson, while the bust of Sir Henry Lyttelton has been attributed to John Greenhill.

GERMANY

North German Painting.—In *Mh. f. Kunstw.* XII, 1919, pp. 33-38 (7 pls.), K. SCHAEFER publishes several paintings that add to the history of painting in northern Germany in the fifteenth century. Some of these can be ascribed to a definite artist, Hinrik Funhof.

Schongauer Genealogy.—A genealogical table of the Schongauer family, together with the documents in which may be found proof of the correctness of its items, is published by E. MAJOR in *Mh. f. Kunstw.* XII, 1919, pp. 101-106.

Veit Stoss.—A crucifix in the Chapel of Schloss Matzen in North Tyrol is discussed by the owner, W. A. BAILLIE-GROHMAN in *Burl. Mag.* XXXV, 1919, pp. 129-136 (pl.). The work was until recent years assigned to the Dürer school, but is now recognized as the work of Veit Stoss on the ground of its resemblance to such works by that master as the S. Sebaldus crucifix in Nürnberg. A document which may refer to the Matzen example would date it in 1503. Some corrections in the literature relating to this same master are made by F. DETTLOFF in *Mh. f. Kunstw.* XII, 1919, pp. 95-100. These have to do with the chronological order of the artist's works in marble in Cracow in the years 1492 to 1495. The monument principally concerned is the grave slab of Zbigniew Olesnicki. Though the commission for this was given soon after the death of the bishop in 1493, the work was delayed because of the

intervention of more important commissions, especially that for the monument to King Casimir for the Cracow cathedral. *Ibid.* XI, 1918, pp. 297-309 and XII, 1919, pp. 14-25 (28 figs.), W. VON GROLMAN shows that, in spite of the extensive studies that have been made of Veit Stoss, judgment of his worth has up to now been built on a false basis because of the lack of sufficient knowledge of his principal work, the Cracow Mary altar. A careful analysis of the eighteen reliefs of this great work is here given and many good reproductions made accessible. There are superficial and spiritless passages in these reliefs, to be sure, but such passages are plainly from the hands of atelier assistants, who could only grasp the general form of the master. At times, as in the relief of the Birth of Mary, the principal figures are among the master's finest conceptions, while a subordinate figure, as the maid here, is the stiff, wooden work of another. Particularly convincing are the results of the comparisons of the Ascension and the Descent from the Cross with the Pentecost and the Entombment respectively. The first two are almost wholly by Stoss himself; the second two, which must be atelier pieces, repeat many details of the Ascension and Descent from the Cross in individual figures and even in the grouping, but the soul is gone, only sentimental pretension remains. The parts of the altar that can be recognized as his own work prove that it is to the early work of Veit Stoss that we are to look for the zenith of his artistic production, and that these proclaim him one of the richest in thought and deepest in feeling of the artists of all times.

Peter Vischer.—Contributions to the study of Peter Vischer are made by H. STIERLING in *Mh. f. Kunstw.* VIII, 1915, pp. 366-370 (see *A. J. A.* XX, 1916, p. 260); X, 1917, pp. 297-300 (pl.); XI, 1918, pp. 17-20 (pl.), 113-125 (7 pls.), 172, 245-268 (9 pls.), 341-344 (pl.); XII, 1919, pp. 47-56 (6 pls.). A grave slab with a relief portrait of the duchess Sophie von Mecklenburg in Weimar which has received various attributions, is principally the work of Vischer. While the fact that the frame is cast with a small part of the drapery of the figure makes it clear that it was done at the same time with the rest and in the same atelier, the style differs from that of the master so that the frame must be attributed to another working in the same shop; undoubtedly it was done by the artist who leaves his name upon it, Thile Bruith. The portrait plaque of Heinrich Stärcker von Mellerstadt, in the cathedral at Meissen, which has been assigned to Vischer by Cramer and others does not belong to him, though it has some of his characteristics. A more important problem to which at least a partial solution is here given is that concerning the Sebald monument. Such details as the abrupt superposition of Renaissance columns upon the lower parts of Gothic pillars indicate that Peter Vischer, the younger, took a hand in the work after his father had completed the wax model. Indeed, the stylistic qualities bear out the assumption that the son is responsible for the greater part of the monument as it stands. Not only did he change what his father had done, but there is at least one clear indication that he changed his own plans as he worked—the lower part of an arch is visible in one place; the trouble was not even taken to eliminate this from the model when the plan for the arch was abandoned. A further confirmation of the change in the father's original plan, as well as an indication of his prototype, is given by the plan of the baldachin grave monument of Pope Innocent VI, which was, until its destruction, in Villeneuve-les-Avignon. This shows in general what the

Sebald monument would have been without the younger Vischer's Renaissance alterations; for the architectural plan of the original is kept in the final form, while the changes consist largely of additions. The type may have been brought to Nürnberg in drawings; at any rate the monument of Innocent VI proves that it is in southern France that the baldachin type of the Sebald monument—unique in German art—is to be sought. Apropos of the question of the originality of Peter Vischer, the younger, a number of his drawings and finished works are studied and placed beside their prototypes in the works of Dürer, Jakob Elsner, Mantegna, Zoan Andrea, and others. The fact that the similarity between the drawings and the models is very close does not refute the fact that much originality was displayed in the final plan. Finally, a number of grave slabs in the Würzburg cathedral must not be omitted from the study of the Vischer family. All but one of these represent canons of the church; that one, which is the finest, portrays Bishop Lorenz von Bibra. Some of the examples can be studied only in the eighteenth century engravings of Salver. These engravings are useful even in the cases of extant slabs, for they show that important changes have since been made, as *e.g.*, in the substitution of later frames. G. KÜSTER, *ibid.* X, 1917, pp. 315–324, assuming that the whole Sebald monument is by Peter Vischer the elder, contends that he must have gone to Italy since there are not sufficient indications of Italian influences coming to Nürnberg to account for the Italianized character of much of the work. Because there are evidences of Renaissance motives on the monument, cast at the same time with the base which bears the date 1508, it is concluded that the elder Vischer's sojourn in Italy must antedate that time.

The "Eselweckgrabmal" by Hans Backofen.—A grave monument in the cloister church of Eberbach in the Rheingau, which is recognized as the work of Hans Backofen, is discussed by K. SIMON in *Mh. f. Kunstw.* XII, 1919, pp. 283–285 (pl.). The man in whose honor the monument was made and who is represented in relief is shown to be Wigand von Hynsperg. Some information is given in regard to his life, adding to one's appreciation of the splendid representation of the figure. It is done in lower relief than is usual with Backofen. The date is about 1512.

Anton Möller.—The artistic origins ascribed to Anton Möller, a painter of Danzig of the latter part of the sixteenth century, by Walter Gyssling are debated by H. EHRENBURG in *Mh. f. Kunstw.* XI, 1918, pp. 181–190 (2 pls.). The Italianized features of Möller's paintings led Gyssling to the assumption that the artist had a long sojourn in Italy. But there is no evidence of such a sojourn and no reason for supposing it, since Italian influence was firmly established in upper Germany and the Netherlands in the second half of the sixteenth century, and Möller much more probably was thus indirectly, rather than directly, subjected to the influence. This becomes the more likely solution when we consider that he shows many Flemish traits in his works, as in the proportion of figures, outline of faces and fashion of costumes.

The Landscape Drawings of Dürer.—The importance of Dürer as a landscape artist is discussed by F. WEITENKAMPF in *Burl. Mag.* XXXV, 1919, pp. 136–143 (2 pls.). The fact that in the engravings the landscapes are rather formalized—*i.e.* are two or three removes from nature—gives one a false idea of Dürer's real ability and accomplishments in nature study. It is in his sketches, done with brush, pen, crayon, and silver-point, that one sees how modern he was in sympathetic interpretation of nature.

Two Altar Wings after Dürer.—An interesting case of borrowing from Dürer's Life of Mary is seen in the two painted wings of an altar from the church of St. Paul in Hildesheim, published by O. GERLAND in *Mh. f. Kunstw.* XI, 1918, pp. 81–86 (2 pls.). Each wing has two paintings; the upper ones, representing the Nativity and the Rest in Egypt, are based on parts of Dürer's series, particularly his Rest in Egypt and Adoration. In the two lower paintings, the Descent of the Holy Ghost and the Death of Mary, the artist lapses into his own style. Dates relating to the construction of the church place this work on the altar between the years 1512 and 1525. The artist, very clearly a Middle German, is probably Hans Raphon, who lived in the vicinity of Hildesheim at this time.

The Dresden Crucifixion by Dürer.—The authenticity of the painting of the Crucifixion in Dresden signed with Dürer's monogram and dated 1506 is discussed by H. KEHRER in *Z. Bild. K.* XXVII, 1915–16, pp. 163–171 (10 figs.). Views *pro* and *con* have been expressed in regard to the work since it became known in the forties of the last century, but no thorough analysis has been made until now. The first thing about the picture that attracts suspicion is the transparent, enamel-like technique of the painting, which is unlike Dürer's work. The date, 1506, is the most plausible one that could have been chosen, for it would place the work in the year of Dürer's sojourn in Venice, at a time when he might have been under such Italian influence as the Dresden picture evinces. But the monogram, though similar in general arrangement to some of Dürer's executions of it, lacks his firm, sure strokes. The boneless structure of the head, indecisive character of the chin, lack of focus in the eyes, indifferent movement of the fingers, and, above all, the baroque, sentimental, publican-like expression of the Christ cannot be attributed to Dürer when one thinks of the altogether different drawing (L.490) of Christ on the Cross which he had already made in 1505. Another important consideration is that no paintings of this time and even much later have the single motive of the Crucifixion; there are always other figures shown. Not until 1571, inspired by the Reformation, do we find the single subject, when it appears for the first time in a painting by Lucas Cranach, the younger. The author of the Dresden painting is no doubt to be sought among that class of painters who in the late sixteenth and early seventeenth centuries were instigated by the increase in the popularity of Dürer's art at that time to imitate his drawings and copy them in oil. Among those artists are Hans Hoffmann, Johann Georg Fischer, and Jeremias Günther. E. H. ZIMMERMANN (*ibid.* p. 228) agrees with Kehrer in denying the Dresden painting a place among Dürer's works but points out a few mistakes in certain of that writer's conclusions. The earliest date of the appearance of the single motive of the Crucifixion in painting is not 1571. The Crucifixion by the younger Cranach from the year 1540 in the National Gallery of Ireland at Dublin proves this; and it is to this little painting that one must go for the author of the Dresden panel. The two differ only slightly in details; even the same inscription appears on both, though Cranach's lacks the Dürer signature and date. It is very clear that the Dresden example is a late sixteenth century continuation of the type developed in the Cranach atelier. It does not seem likely that it is a conscious forgery; more probably the monogram was added later. *Ibid.* XXVIII, 1916–17 (fig.) H. KEHRER reproduces the Dublin Crucifixion in question, which he had not known before, and also

mentions another version called to his attention by K. Voll. It is a "Flemish" Crucifixion, much larger than the Dresden example but more like it than the one in Dublin. A photograph of the new parallel, belonging to Prince Jussupow, Petrograd, is not yet accessible.

Dürer's Engraving of "The Four Witches."—In *Rep. f. Kunstw.* XXXIX, 1916, pp. 129–135 (6 figs.), E. SCHILLING explains some peculiarities of the figures in Dürer's engraving of the four witches by a comparison of it with the artist's drawing of women bathing (L. 101 Bremen). From this drawing Dürer has taken over with almost no changes some parts of figures for his witches. Not so efficient in the technique of engraving in his early years as in that of drawing, he has not succeeded in coordinating these parts of figures to the rest of the composition, so that the result is not a happy one. This observation is also significant in the question of Dürer's relationship to Jacopo de' Barbari. Critics, for example, have believed that one of Dürer's witches was borrowed from Jacopo's engraving of Victory and Fame (Kristeller 26), but the derivation of Dürer's engraving from his own drawing of the bathing women proves a reversal of the relationship, Jacopo has borrowed from Dürer. Another work related to the engraving of the witches is the drawing of Veritas in the Uffizi, which has been considered the work of Dürer. But this elegant, superficial figure may be much more reasonably attributed to Hans von Kulmbach.

Jörg Kändel.—The problem of determining the authors of the various parts of late Gothic altar shrines with wings is complicated by the fact that only one artist is mentioned in the documents as responsible for a whole work, while in the actual execution one may do the painting, another the sculpture, or both techniques may be used by the same master. Jörg Kändel, an important upper Swabian artist of the first half of the sixteenth century, is recorded as a painter; but his work in sculpture proves to be more extensive and important than that in painting. The elaborate use of parallel folds of drapery is one of the most striking characteristics of his work. But a comparison of the various related works of his style shows that we have to do not with a single "master of parallel folds," but with several, and that the workshop of Jörg Kändel in Biberach spread the manner in Swabia and Switzerland. (J. BAUM, *Mh. f. Kunstw.* IX, 1916, pp. 419–423; 5 pls.)

GREAT BRITAIN

A Pre-Reformation English Chalice and Paten.—In *Burl. Mag.* XXXIV, 1919, p. 231 (pl.), E. A. JONES publishes a chalice and paten which he believes to be English work of about 1530. M. S. D. WESTROPP, however, thinks that the chalice is here dated a century too early and that it is more likely an Irish production (*Ibid.* XXXV, 1919, pp. 85–86).

AMERICAN ARCHAEOLOGY

GENERAL AND MISCELLANEOUS

Prehistoric Remains in Southwestern Colorado.—The prehistoric remains of southwestern Colorado form the subject of a monograph by Dr. J. WALTER FEWKES recently published by the Bureau of American Ethnology (Bulletin

70). Twenty village sites are described, as are cliff-dwellings, great houses and towers, the megalithic and slab house ruins at McElmo Bluff, artificial reservoirs, pictographs, and minor antiquities. The author thinks it possible to distinguish two epochs of house building among these ruins, an early and a middle stage of development. [*Prehistoric Villages, Castles and Towers of Southwestern Colorado*. By J. WALTER FEWKES. (Bureau of American Ethnology, Bulletin 70.) Washington, 1919, Government Printing Office. 79 pp.; 18 figs. 8vo.]

Archaeological Explorations in Northeastern Arizona.—Bulletin 65 of the Bureau of American Ethnology is devoted to an account by A. V. KIDDER and S. J. GUERNSEY of their explorations in the Kayenta district of northeastern Arizona in the summers of 1914 and 1915. The work was conducted for the Peabody Museum of Harvard University. The sites excavated and the archaeological material brought to light are fully described and the general results of the excavations set forth. The authors discovered two distinct cultures, those of the "Cliff-house" and the "Basket-maker," which are explained and contrasted. Some evidence was also found for a third, the "Slab-house" culture. The work had not been completed when the volume was published. [*Archaeological Explorations in Northeastern Arizona*. By ALFRED VINCENT KIDDER and SAMUEL J. GUERNSEY. (Bureau of American Ethnology, Bulletin 65.) Washington, 1919, Government Printing Office. 228 pp.; 97 pls.; 102 figs. 8vo.]

The Serpent Mound of Adams County, Ohio.—In *Am. Anth.* XXI, 1919, pp. 152-163 (3 pls.; 5 figs.), C. C. WILLOUGHBY discusses certain features of the Serpent mound of Adams County, Ohio. He treats of the various published drawings of this effigy and compares them with his own observations and with certain designs found on artifacts from other Ohio mounds. He concludes that the embankment beyond the "egg" is a true part of the original effigy mound.

Indian Remains in Texas.—In *Am. Anth.* XXI, 1919, pp. 223-234, J. E. PEARCE tells of "Indian mounds and other relics of Indian life in Texas." He finds that the state is divided roughly into five archaeological provinces. The district between the Sabine River and the 96th parallel contains many mounds, mostly near the streams, in which occur "skeletons, clay pots, and flint implements." Along the shores of the Gulf are many shell heaps, some of which are of considerable size. The Grand Prairie region of central Texas has little evidence of Indian life except in a few localities where flint quarries and kitchen refuse heaps are to be found. The region extending from the Grand Prairies to the Pecos has many mounds with circular depressions in their centres. The trans-Pecos region has the same sort of mounds, and in addition metates and pictographs.

The Kankakee River Refuse Heap.—In *Am. Anth.* XXI, 1919, pp. 287-291, GEORGE LANGFORD describes "the Kankakee river refuse heap" in Illinois. He finds that the most characteristic artifacts on this site are small triangular points "unstemmed," rejects, scrapers, adzes, and pottery fragments.

The Antiquities of Adams County, Wisconsin.—In the *Wisconsin Archeologist*, XVIII, No. 2, 1919, pp. 43-84 (8 pls.; 14 figs.; map), H. E. COLE and H. A. SMYTHE give a description of all the known antiquities of Adams County, Wisconsin, with measurements and drawings of many of the effigy mounds.

A Handbook of American Antiquities.—The Bureau of American Ethnology has published (Bulletin 60) the first part of a *Handbook of Aboriginal American Antiquities* by Professor WILLIAM H. HOLMES of the National Museum. After a general survey of the subject, and of the problems which it presents, he sets forth the characteristics of the twenty-two culture areas into which he divides North and South America, discusses quarries, mines, etc., and describes in detail the various methods of working stone. The second part of the work will contain a study of implements, utensils, and minor artifacts of stone. [*Handbook of Aboriginal American Antiquities. Part I. Introductory. The Lithic Industries.* By WILLIAM H. HOLMES. (Bureau of American Ethnology, Bulletin 60.) Washington, 1919, Government Printing Office. 380 pp.; 223 figs. 8vo.]

Helmets of the Tlingit Indians.—In *Mus. J.* X, 1919, pp. 43-48 (6 colored pls.), L. S(HOTRIDGE), a Chilkat Tlingit Indian, describes a collection of war helmets and clan hats made by him among members of his tribe and now in the Museum of the University of Pennsylvania.

The Maya Indians of Southern Yucatan.—Under the title of *The Maya Indians of Southern Yucatan and Northern British Honduras* THOMAS W. F. GANN publishes a study in two parts, one devoted to the customs, ceremonies, and mode of life of the modern Mayas; and the other to a detailed account of the excavation of forty-one mounds in the eastern Maya area. These mounds had originally served for various purposes, but from them was taken considerable archaeological material which throws much light on the ancient inhabitants of the region. Some of the vases found are reproduced in colors. [*The Maya Indians of Southern Yucatan and Northern British Honduras.* (Bureau of American Ethnology, Bulletin 64.) By THOMAS W. F. GANN. Washington, 1918, Government Printing Office. 146 pp.; 28 pls.; 84 figs. 8vo.]

Clay Heads from Teotihuacan.—In *Man*, XIX, 1919, pp. 33-34 (pl.), A. C. BRETON describes some small clay heads found at Teotihuacan of a type found nowhere else. Each site in the vicinity shows local peculiarities in this type.

A Terracotta Figure.—In *El Mexico Antiguo*, I, 1919, pp. 73-81 (pl.; 13 figs.), H. BEYER discusses the terracotta figure of a man found at Texcoco and now in the American Museum of Natural History of New York (published by M. H. Saville, *Bulletin*, 1897, pp. 221 ff.). The figure is standing with open mouth and appears to be wearing armor. The writer argues that it is a representation of the god Xipe, not merely the figure of a warrior.

A West Indian Stool.—In *Man*, XIX, 1919, pp. 1-2 (pl.), T. A. JOYCE describes a wooden "stool" found on Eleuthere Island, Bahamas. The stool was carved in unmistakably West Indian fashion. The writer gives an historic note on the use of such objects.

An Unidentified Object from Santo Domingo.—In *Man*, XIX, 1919, pp. 145-149 (pl.), J. W. FEWKES describes a curved wooden object from Santo Domingo. He considers objects of this kind to be neither seats nor mortars but some sort of ceremonial form, the cavity being for the offering of cakes.

NOTE

The BIBLIOGRAPHY OF ARCHAEOLOGICAL BOOKS, 1919, will appear in No. 3.

SPANISH IVORIES OF THE XI AND XII CENTURIES IN THE PIERPONT MORGAN COLLECTION

AMONG the Pre-Gothic ivories in the Pierpont Morgan Collection, presented to the Metropolitan Museum in 1917, are five ivories, or possibly six, of Spanish origin, dating from the eleventh and twelfth centuries. Certain of these have already been published. In the second volume of his monumental work on Carolingian ivories,¹ Goldschmidt illustrates and describes an ivory figure of the Crucified Saviour² mounted on a cross of copper gilt. Goldschmidt's attribution of this crucifix to northern Spain is convincing, but the date which he proposes, about 1200, seems somewhat late. I prefer to assign it to the close of the twelfth century. Some fifty years earlier is the fine plaque³ with two scenes from the Resurrection cycle, the Journey to Emmaus and the *Noli me tangere*, which was formerly in the Guilhou and Hoentschel Collections. It is published in the Catalogue⁴ of the Hoentschel Collection and described as Spanish, tenth century. This date is far too early; the ivory must surely be assigned to about the middle of the twelfth century. Possibly of the same period and provenance is another ivory from the Hoentschel Collection, representing Christ in Majesty, described in the Catalogue⁵ as French, first half of twelfth century. In the following notes I propose to discuss the remaining ivories, which, as far as I have been able to ascertain, have not been described.⁶

¹ Goldschmidt, *Die Elfenbeinskulpturen aus der Zeit der Karolingischen und Sächsischen Kaiser*, II, No. 27, p. 23, pl. X.

² Accession No. 17.190.221.

³ Accession No. 17.190.47.

⁴ *Collections Georges Hoentschel. Introductions et Notices de M. André Peraté. Ivoires, Orfèvrerie religieuse, Pierres.* 1911, No. 11, pl. XI.

⁵ *Op. cit.*, No. 16, pl. XIV.

⁶ Except for brief references in my general survey of the Pre-Gothic ivories published in *B. Metr. Mus.* January, 1920, and for the description, unillustrated, of the Queen Felicia book-cover in the Carmichael Sale Catalogue.

The earliest of these is illustrated in Figure 1. It is a small plaque,¹ measuring $2\frac{1}{2}$ inches in height by $4\frac{3}{8}$ inches in width. The subject is difficult to identify. Four men support on their shoulders a pole, from which is suspended an object possibly intended to represent a tree trunk. A naked woman lies beneath this object and touches it with her right hand. I suggest that the scene relates an incident connected with the Invention of the Holy Cross.

When St. Helena found the three crosses which had been buried by the Jews in a ditch or well, it was impossible to determine



FIGURE 1.—SPANISH IVORY, ELEVENTH CENTURY: METROPOLITAN MUSEUM.

which of the three was the Cross upon which Christ had died, as the *titulus* was missing. In this quandry, St. Macarius, Bishop of Jerusalem, was divinely inspired to have all three carried, one after the other, to a sick woman who lay at the point of death. When she touched the True Cross, the woman suddenly became well, and by this miracle the problem of identification was solved. Another test of the Cross was made, according to St. Paulinus, by St. Helena, who caused a man already dead and buried to be brought in contact with the Holy Cross, whereupon he came to life. The recumbent figure in the Morgan ivory, however, is that of a woman, indicating, if my surmise is correct, that the reference is to the test carried out by St. Macarius.

As to the representation of the Cross in the form of a tree, it is hardly necessary to recall the legend which relates that Seth

¹ Accession No. 17.190.142.

planted over Adam's grave a branch from the Tree of Knowledge, which endured until the time of Solomon, who cut the tree down that it might be set in his house. There it was venerated by the Queen of Sheba, who said that the Saviour of all the world should be hanged thereon. Solomon then caused the tree to be buried deep in the earth, where it was discovered by the Jews and used for the timber of the Cross; so that, to quote from the Golden Legend, "the cross by which we are saved came of the tree by which we were damned."

The plaque is carved in fairly high relief. As decoration, the work is not unsuccessful, but the strangely flattened faces with large elongated eyes (now almost obliterated by the rubbing which the ivory has suffered) and the conventional rendering of the bodies and limbs are crude and primitive in character. In the treatment of drapery, however, the carver displays a marked feeling for rhythm, and succeeds in giving the effect of movement to the figures. The modeling of the drapery is strengthened by short parallel lines cut in the opposite direction to the fall of the folds. This engraving technique, if one may call it so, is characteristic of early Spanish ivories.

The style is identical with that of the ivories of the Shrine of San Millan, which Sancho the Great, King of Navarre (d. 1035), ordered made in 1033 and presented to San Millan de la Cogolla (Province of Rioja). In the ivories of the Shrine we note the same facial types, the same technical characteristics in the rendering of form and the treatment of drapery, and the same costume. The similarity is so close that the Morgan ivory, which is said to have been found at Salamanca, may be assigned with certainty to the same atelier as the San Millan Shrine, and to the approximate date of this monument.

Were these ivories carved by a Christian artist of Spain or by a Musulman working under Christian patronage and direction? Whether or not the Christian names¹ which appear on the Shrine may properly be considered the names of artists, the crudity of the work, when compared with the dextrous carvings of the Spanish Moresque caskets of the same date, makes one hesitate to describe the Shrine as the work of a Spanish Arab. At the same time, the influence of the Musulman art of Spain is most evident. This composite style may be described as Proto-Mudejar.

¹ J. F. Riaño, *The Industrial Arts in Spain*, p. 134.

Of the rare Spanish ivories of this early period carved with Christian subjects, undoubtedly the most famous is the ivory crucifix presented, with other precious objects, in 1063 by Ferdinand the Great, King of Castile (d. 1065), and his Queen Doña Sancha of Léon (d. 1071), to the Church of San Isidoro at Léon.¹ This crucifix is now in the Archaeological Museum at Madrid.

The crucifix is unusually large, measuring 21 inches in height by 13½ inches in width. The Saviour's eyes are represented open; the pupils are made of jet. The head is bent down and inclined to one side. Nails transfix the hands; both feet, which rest upon a *suppedaneum*, show the wounds made by the nails. A loin cloth reaches from the waist to the knees.

The cross is elaborately carved on both sides. The short vertical arm above the head of Christ is inscribed IHC NAZA|RENVS REX | IVDEORV(M); above this is a small figure of Christ bearing the Resurrection Cross. Below the *suppedaneum* is a crouching figure of Adam, who gazes upward, and the inscription: FERDINANDVS REX | SANCIA REGINA. Animal and human forms swarm upon the borders of the cross. These reliefs represent the Descent into Hell, the Resurrection of the Flesh, the Opening of the Sepulchres, and Man's Conflict with Evil, symbolized by devouring beats. On the reverse, the Agnus Dei holds the central position. At the extremities of the arms are the symbols of the Four Evangelists. The other decoration consists of a formal border pattern and of large foliated medallions with figures of animals and men.

The crucifix² is generally accepted as Spanish, but opinions differ as to whether it is the work of a Musulman or of a Christian artist. In either case a Byzantine model has presumably been

¹ For the letter of testament see *España Sagrada*, XXXVI, Appendix, p. clxxxix. The reference to the Crucifix is "*—crucem auream cum lapidibus compactum, olovitream, et aliam eburneam, in similitudinem nostri Redemptoris Crucifixi.*" The other ivories in the gift comprised boxes and diptychs—"et capsam eburneam operatam cum auro, et alias duas eburneas argento laboratas, in una ex eis sedet intus tres aliae capsellae, in eodem opere factae, et dictacos cultiles eburneos."

² Brief bibliography: J. F. Riaño, *Spanish Arts*, p. 135. Linas, 'Le Crucifix de la Cathédrale de Léon au Musée de Madrid,' *R. Art Chrét.* 1885. E. Molinier: *Histoire Générale des Arts appliqués à l'Industrie*, I. Ivoires, p. 168. G. Migeon, *Manuel d'Art Musulman*, II, pp. 141-144. L. Williams, *The Arts and Crafts of Older Spain*, II, pp. 99-104. Paul Mayeur, 'L'Iconographie du Crucifix de San Isidoro de Léon,' *R. Art Chrét.* 1909, p. 255 ff.

followed for the principal features of the crucifix. The Christ is the least successful part of the work. It has been argued¹ that the crudity of this figure, which is certainly inferior to the surprisingly vivacious representation of the human form in movement elsewhere on the cross, indicates that the figure of Christ and the surrounding decoration are not the work of the same hand. It hardly seems necessary to adopt this theory of two craftsmen, one skilled and the other inexpert. Aside from the fact that the principal figure would scarcely have been entrusted to the less skilful of the two, there are sufficient reasons to explain these differences in quality in the work of one artist. In the first place, the much smaller scale of the little figures on the cross tends to conceal the artist's deficiencies in anatomical knowledge, which become conspicuous in the large figure of Christ, where, furthermore, through the nature of the subject, the carver had no opportunity to give the effects of movement which lend so much animation to the other carvings. Again, the small figures, the fantastic animals, and the vine scrolls were probably derived from other sources than the model followed for the Christ. This would help to explain the diversity in style which has been noted in the execution of the San Isidoro ivory. In my opinion, one artist is responsible for all the work on the crucifix. The fineness of the execution, especially of the ornament, and the technical peculiarity, essentially Oriental, of the deep-set background on which the relief appears to be applied as cut-work, lead me to believe that the San Isidoro Crucifix was carved by a Spanish Arab who brought to the service of his Christian patron the skilled craftsmanship and the genius for decoration which are so amazingly displayed in the ivory caskets carved for the Mohammedan rulers of Spain.

In the Morgan Collection is a plaque (Fig. 2), measuring $5\frac{5}{8}$ inches in height by $3\frac{1}{2}$ inches in width, which is undoubtedly by the same artist who carved the San Isidoro crucifix.² The technique is the same. The figure of Christ and the symbols of the Evangelists are repeated practically without change. The two birds in foliated scrolls in the upper border of the Morgan plaque and the corresponding design of confronted animals in the lower border are found on the front of the San Isidoro crucifix at the extremities of the lateral arms. The animals and men in

¹ Leonard Williams, *The Arts and Crafts of Older Spain*, II. p. 103.

² Accession No. 17.190.40.

the *rinceaux* of the side borders of the Morgan plaque have the closest analogies with similar representations on the crucifix. The tessellated background is found on both pieces. The



FIGURE 2.—SPANISH IVORY BOOK COVER, ELEVENTH CENTURY: METROPOLITAN MUSEUM.

Morgan plaque, which was evidently made for a book cover, to judge from the holes for attachment surrounded by vine wreaths in the four corners of the plaque, is inscribed on the lower margin: IHC H(*sic*)AZARENVS REX IVDEORV(M).

On either side of the cross in the Morgan ivory stand the Virgin and St. John; above the lateral arms of the cross are symbolic

representations of the sun and the moon; above the head of Christ is an angel. These additional figures, which naturally do not appear on the San Isidoro ivory, indicate that, for the Crucifixion at least, the carver followed a Byzantine model. The influence of Musulman art is apparent, however, in the technique of the carving, in the leaf and animal forms, and in the general character of the decoration. The Morgan plaque may be dated, through its affinity to the San Isidoro ivory, about the middle of the eleventh century. It is a piece of exceptional importance, not only because of the rarity of early Spanish ivories, but also on account of its association with the celebrated crucifix which Ferdinand and Sancha presented in 1063 to the Church of San Isidoro at Léon.

The remaining ivory, a book cover¹ (Fig. 3), measures $10\frac{1}{4}$ inches in height by $7\frac{1}{2}$ inches in width. The core is of wood. The wide borders are covered with thin plaques of silver gilt decorated with cabochons and bits of enamel, which are interspersed in a freely developed, balanced design of filigree. The sunken central panel is covered with a plaque of silver gilt on which, in repoussé, is a cross, the nimbus of Christ, and two inscriptions: IHC NA|ZARENVS and FELICIA | REGINA. Against this background five small figures in ivory are applied: Christ crucified, the Virgin, St. John, and two mourning women, who probably represent the sun and moon. One would expect any figures, other than angels, occupying the spaces above the lateral arms of the cross, to have this meaning, but the absence of attributes is exceptional and makes identification uncertain. Possibly the zig-zag lines beneath the figures are intended to suggest clouds. On the other hand, the figures appear to be kneeling, and the zig-zags may be folds of drapery awkwardly rendered. Two mourning women without attributes may be instanced as occupying similar positions in a Crucifixion scene on a Carolingian ivory in the National Museum of Budapest.² These figures, however, are certainly intended for the sun and moon since their mantles are gathered up in such a way as to suggest the conventional method of representation.

¹ Accession No. 17.190.33. Formerly in the Carmichael Collection. (Sale Cat. of the Coll., Christie, Mason and Wood, 1902, No. 35.) According to the catalogue, this book-cover came from the Stein Collection, but the piece is not included in the sale catalogue (Paris, 1886) of the Stein Collection.

² Goldschmidt, *Elfenbeinskulpturen*, I, No. 165, pl. LXXVIII.



FIGURE 3.—THE BOOK COVER OF QUEEN FELICIA: SPANISH, ELEVENTH CENTURY: METROPOLITAN MUSEUM.

The carving of the ivories on the book-cover lacks distinction. The heads are disproportionately large; the expressions, sullen; the modeling, unskilful. The four smaller figures are decidedly inferior to the Christ, which may have been copied from a good

model. The attitude of the figures and the general composition of the scene indicate that the carver had at least some acquaintance with Christian iconography, but the forms themselves appear to have been influenced by Musulman carvings on ivory caskets. The long, wide sleeves, turned back at the wrists, suggest the oriental garb of the little figures on these ivory boxes, of which the early eleventh century casket in the Cathedral of Pamplona is a well-known example. There are also analogies in the pose of the figures and in the treatment of the folds of drapery. The peculiar zig-zags, already noted, perhaps have their origin in the V-shaped folds which may be seen in the costumes of certain kneeling women on the Pamplona casket. The design of the filigree on the cover has a Spanish character. On the whole, I think the evidence inclines toward a North Spanish provenance, and a date which may be approximately determined by the inscription on the cover as the third quarter of the eleventh century. FELICIA REGINA is presumably Felicia,¹ the wife of Sancho Ramirez (ca. 1037-1094), who reigned in Aragon as Sancho I (1063-1094), and in Navarre as Sancho V (1076-1094).

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¹ The Carmichael Catalogue states that "M. Emile Molinier gives the following interesting description of Queen Felicia: '*Felicie, fille de Comte Hilduin, et d'Adele de Chatillon, mourut en 1085. Femme de Sanche Ramirez V^e du nom comme roi de Navarre et I^{er} comme roi d'Aragon.*'" I have been unable to find where Molinier makes this statement, but in any case, there seems to be no reason for discrediting the Spanish genealogists, according to whom Felicia was the daughter of Armengol de Barbastro, sixth Conde de Urgel and of his wife, Doña Clemencia. See D. Diego Monfar y Sors, *Historia de la Condes de Urgel*, I, p. 329.

CENTAUROMACHY AND AMAZONOMACHY IN GREEK ART: THE REASONS FOR THEIR POPULARITY

UNLIKE the Romans, the Greeks, in most branches of their art, made little use of recent historical material.¹ This is pre-eminently true of their monumental sculpture. During the great central period of Greek art, the Fifth and Fourth Centuries, B.C., there is no known Greek building whose sculpture represents a recent historical event, excepting the Temple of Athena Nike ("Wingless Victory") at Athens.² The usual themes are mythological, and of these certain ones enjoyed especial popularity. A few great mythical contests, viz., that of the Gods against the Giants, those of Greeks against Centaurs, against Amazons, and against Trojans, supply subject matter to an impressively large number of decorative Greek sculptures. Of these themes the centauromachies and amazonomachies were the most often repeated. Thus, among the works of the Fifth Century, battles with Centaurs were to be seen at Athens, in painting, within the Theseum and, in sculpture, on twenty-three metopes of the Parthenon, on the sandals of the cult-image in that temple, on the western frieze of the "Theseum" (falsely so called); and on the shield of the colossal bronze statue popularly known as the Athena Promachus; at Sunium on the frieze of the Temple of Poseidon; at Olympia in the western pediment of the Temple of Zeus; at Phigalia (Bassae) on the frieze of the Temple of Apollo. The Fifth Century list for battles with Amazons is almost as long. These were to be seen at Athens, in painting, within the Theseum and the Painted Stoa, and, in sculpture, perhaps on the western

¹ In mural painting, however, historical battle-scenes were not uncommon at any period. The reason for this divergence from monumental sculpture is obscure.

² The Frieze of the Parthenon, although inspired by actual contemporary events, is not strictly historical. It presents a generalized and idealized picture of recurring celebrations.

Lycian sculptures, such as those on the "Nereid Monument" at Xanthus, are excluded from the statement made above.

metopes of the Parthenon and certainly on the shield of the cult-image in that temple; at Phigalia (Bassae) on the frieze of the Temple of Apollo; at Olympia on the throne and again on the foot-stool of the cult-image in the Temple of Zeus. Such are the facts, so far as known, for public buildings and statues. At a humbler level the same subjects figure frequently on the contemporary painted vases of Attica.

What is the explanation of such iteration? A current answer to this question regards these mythical battles as symbols of other, more real and more important, achievements. This general view takes somewhat different forms. Some authorities see in the contests against Centaurs and Amazons covert references to the glorious struggle of Greece against Persia. An eloquent presentation of this interpretation is given by Professor G. Baldwin Brown.¹ The passage is too long to quote, but the gist of it is conveyed in the sentence, "The victory over Persia inspired indirectly all the monuments of the culminating period of Greek sculpture."² Other writers, believing in a symbolic interpretation, read the symbols in a more general way. It is enough to quote Professor Percy Gardner,³ in whose view the metopes of the Parthenon present "the story of the development of order out of chaos, and civilization out of barbarism."⁴

I do not believe in any one of these symbolic interpretations. It is, of course, impossible to prove that no such ideas were entertained by any Greek. But I think it can be made probable that neither the artists who designed the works in question nor the general public understood them in that way. To speak affirmatively, I maintain that the Athenians and other Greeks of the Fifth Century, as well as earlier and later, took the mythical contests now under consideration simply at their face value. The overthrow of the invading Amazons by the Athenians was an important event in the legendary history of Attica. The subject, then, might and probably did stir patriotic emotions among the Athenians. Outside of Attica it had little, if any, patriotic significance. As for the battle of Lapiths against Centaurs, the

¹ *The Fine Arts* (4th ed.), pp. 82-86.

² See also Colvin, *J. H. S. I.*, p. 109; E. Gardner, *Handbook of Greek Sculpture* (1915), p. 495; Roscher, *Lexikon der griech. u. röm. Mythologie*, vol. II, 1038, 1039.

³ *Principles of Greek Art*, p. 315.

⁴ Similar views are expressed by Overbeck, *Geschichte der griech. Plastik*, I, 425; Curtius, *History of Greece* (Am. ed.) II, 623.

Attic hero, Theseus, did indeed take part in it. Nevertheless it was not for the Athenians a national exploit, and accordingly it was not included, as the amazonomachy sometimes was,¹ in the series of great Athenian achievements. In general, I should say that these two stories stood on a par in the minds of the Greeks with other mythical stories, such as that of the Argonauts or that of the Calydonian boar-hunt. They were interesting in themselves and they were on a heroic scale; but they conveyed no reference to events other than themselves.

Several considerations lead to this conclusion. In the first place, it must be borne in mind that the tales of Centaurs and Amazons originated at an early period. Just what set them going it is fortunately needless for present purposes to inquire. Long before the Persian Wars these stories furnished material for artistic representation. Thus the battle of Lapiths and Centaurs appears on the Hesiodic Shield of Heracles, associated with other mythical and with genre subjects. Among the numerous scenes on the Throne of Apollo at Amyclae and the Chest of Cypselus the combat of Heracles with Centaurs found a place. Among extant monuments the François vase, dating from about 560 B.C., has on one side a somewhat extended Lapith-Centaur battle, while on the architrave of the temple at Assos Heracles pursues a group of Centaurs. It is needless to cite additional examples. Contests of Greeks with Amazons also begin to appear on the black-figure vases of the Sixth Century. There is nothing to suggest that in this period Centaur-stories and Amazon-stories had any more meaning than the numerous other tales of the artists' repertory. It is, of course, conceivable that after the great experiences of the Persian Wars these stories took on a new significance; but some positive proof of this ought to be produced before we can accept it.

Now—and this is the second point—there is no ancient authority for the symbolic interpretations under discussion. Considering the extreme meagerness of our ancient sources of information regarding Greek art and especially regarding the popular appreciation of art, this objection is not fatal. But it should at least give us pause. The only passage, I believe, in extant ancient literature which attempts to give a reason for the employment of centauromachy or amazonomachy in art is Pausanias V, x, 8.

¹Isocrates, IV, 68; VI, 42; VII, 75; XII, 193; Ps.-Lysias, II, 4-6; Pausanias, V, xi, 7.

There the writer, after describing the centauromachy in the western pediment of the Temple of Zeus at Olympia, adds this comment: "Alcámenes, it seems to me, represented this scene because he had learned from Homer that Pirithous was a son of Zeus, and because he knew that Theseus was a great grandson of Pelops." (Frazer's translation.) This explanation shows at least that in Pausanias' time the centauromachy was not understood as a symbol for the Persian Wars or for the victory of civilization over barbarism. If such an understanding was current in the Fifth Century B.C., it must have died out.

In the third place, if we are seeking to divine the ideas underlying Greek monumental art during its great period, we are bound, not to single out a few subjects, however popular, but to survey the entire field. What do we find? The range of mythical material employed is considerable. Thus, among the subjects with which Polygnotus and the other painters of the generation following the Persian Wars adorned the walls of public buildings in Athens and elsewhere, we find the visit of Odysseus to Hades, the slaughter of the suitors of Penelope, the seizure of the Leucippides by Castor and Pollux, the return of the Argonauts, the expedition of the Seven against Thebes. The Temple of Athena at Tegea, an important building of the early Fourth Century, had in its eastern pediment a group representing the Calydonian boar-hunt. Is it likely that these compositions suggested hidden patriotic meanings? And, if not, is it not arbitrary to assume that other compositions, drawn from the same great storehouse of mythology, were invested with symbolic significance?

In the fourth place, we find centauromachies and amazonomachies used in the Fifth and Fourth Centuries under circumstances where their supposed symbolic meaning would be inappropriate. I refer to the Heroön at Trysa in Lycia and the Mausoleum at Halicarnassus. The former of these must have been the funeral monument of some Lycian chieftain. Even if he claimed to be a Greek, as Benndorf supposed, he was a Persian subject. So was the Carian satrap to whom the Mausoleum was erected. We have to strain probability a good deal in order to believe that subjects currently understood in Greece as typifying the successful resistance of Greece to Persia were used to adorn these edifices. Even the vaguer significance of the triumph of Greek civilization over barbarism would seem out of place.

Finally, there is an argument which appears to me to have considerable value. Whereas in a gigantomachy the gods are, of course, unmistakably victorious over their enemies, in a centauromachy or an amazonomachy there is, as a rule, but slight indication, if any, of victory. Pausanias (I, xvii, 2) describes as follows a painting by Micon: "In the sanctuary of Theseus there is also painted the battle of the Centaurs and Lapiths: Theseus has already slain a Centaur, but the others are fighting on equal terms." (Frazer's translation.) Of the twenty-three metopes of the Parthenon with Centaurs and Lapiths six give a decided advantage to the Lapiths; six show apparently undecided struggles; eleven, including the four in which the Centaurs carry off women, give the advantage to the Centaurs. Take again the centauromachy on the west frieze of the so-called "Theseum." There, to be sure, the Lapiths outnumber the Centaurs by two, but otherwise there is nothing to indicate which side is to gain the day. This apparent indifference to the outcome of the contest goes so far that on red-figure vases we sometimes find, represented alone, the incident of the Lapith Caeneus being rammed into the ground by two Centaurs.¹ Now it is true that a Greek, looking upon any of these scenes, could have felt no doubt of the general issue; that was fixed in legend. But if the artists had really intended to suggest by allusion a Greek triumph, is it likely that they would have balanced the antagonists so equally and even have detached from the story an incident of Lapith defeat?²

What then is the explanation of the popularity in Greek art of centauromachy and amazonomachy? In my opinion there is no need to hunt for any far-fetched explanation. These subjects commended themselves to the painters and sculptors of the Fifth Century and later, partly because they were drawn from famous and honorable exploits, but chiefly because they afforded an inexhaustible variety of artistic themes. Add the self-perpetuating power of a fashion once established and you probably have the whole story.

¹ *E. g. Mon. Ant.* IX, Pl. 2, a vase-painting by Polygnotus, dating about 460 B.C.

² Contrast the painting of the Battle of Marathon in the Painted Stoa, where, although at one side the struggle was undecided, the rout of the Persians was made clear (Pausanias I, xv, 1). In those parts of the frieze of the Temple of "Wingless Victory" which represent a battle or battles between Greeks and Persians the superiority of the Greeks is marked.

This will seem to some a lame and impotent conclusion. It would indeed be agreeable to believe, with Professor Baldwin Brown (*The Fine Arts*, p. 83), that "the primary conception of Greek as opposed to barbarian . . . —Hellas against the non-Hellenic—formed the fundamental theme of Greek monumental art." But this is a modern illusion. It must dissolve if the evidence be critically examined.

F. B. TARBELL.

CONTRIBUTIONS OF GREEK ART TO THE MEDUSA MYTH

WHILE the Medusa myth doubtless grew up by the same cumulative process as other myths, the oldest extant representations of it show that as early as the seventh century B.C. its main features as we know them today were current. Naturally it was the culminating incident which furnished the motive to the artists, and the earliest representations of the myth, such as the metope from Selinus,¹ the Boeotian vase relief in the Louvre,² and, later in date, a black-figured vase by Amasis in the British Museum,³ all depict the act of decapitation, and in the first two representations just mentioned there is a probable suggestion of the birth of Pegasus.

The type of physical frightfulness is practically the same in all archaic representations, whether of the myth, the mask, or the single full figure. All have the broad face with wide staring eyes; an ugly grinning mouth with the tongue almost invariably outstretched and usually displaying gnashing teeth and tusks. But the detail which the name of Medusa generally suggests to modern students—the “snake hair,” or the hair changed into snakes by Athena by way of retribution—is absent. This detail is one of the two accretions to the myth which it is proposed to consider in this paper.

The stock patterns of grotesque masks used on coins and gems, in relief sculpture, and in vase painting of the seventh, sixth, and even fifth centuries have been more or less loosely classed under the name of “Gorgon masks.” It is evident that these masks did not always refer to Medusa or the Gorgon sisters, but were often intended to represent Phobos or some male demon. But a brief comparative study will make apparent the close relationship, artistically, between these decorative masks and the Gorgon faces in the archaic representations of the myth.

¹ Benndorf, *Die Metopen von Selinunt*, pl. I

² *B. C. H.* XXII, 1898, pl. V.

³ *Wiener Vorlegeblätter*, 1889, pl. IV, 1, b.

A typical Gorgon or Phobos mask of a stock pattern used in black-figured vase painting occurs on a cylix in the Bibliothèque Nationale in Paris (Fig. 1). Comparing the shape of the face and the features of this mask with the face of Medusa on a black-figured oenochoe in the British Museum (Fig. 2), or with that of Medusa on a red-figured amphora in Munich (Fig. 3), we find a resemblance so strong as to prove that artistically the conception of the creatures represented was the same. Again, we find the same strong resemblance between the mask on certain fifth century coins of central Greece,¹ and Medusa's face in the representation of the myth on the Selinus metope already referred to. Numerous other comparisons might be made, but the point seems too obvious to require further elaboration. It is, therefore, to these masks that I shall refer primarily in considering the development of the snake hair, since in rendering the mask the artist, having an



FIGURE 1.—MASK ON CYLIX: BIBLIOTHÈQUE NATIONALE, PARIS.

ample field and a simple subject, naturally gave more attention to facial details than he did when dealing with a complex subject like the myth. But we shall see that the Gorgon head in the representations of the single full figure followed the same course of development in regard to the snakes in the hair as the masks, though with less elaboration.

It is generally admitted and is substantiated by existing monuments, that in the archaic period snakes were not considered a necessary attribute of either Medusa, the Gorgon sisters, or of Phobos, and certainly they do not appear in the hair of Medusa. It is true that the snakes were occasionally used decoratively in

¹ See *B. M. Catal. of Coins, Central Greece*, pl. XXII, 1, 2, 3 and 8.

connection with the mask, as on a warrior's shield on a black-figured vase by Execias in the Vatican.¹ But the shield on the opposite side of the design is decorated with a mask of Silenus similarly accompanied by a snake, though the reptile was not an attribute of Silenus.

Sometimes, though rarely, snakes were used decoratively on the person of Medusa in the representations of the myth. An excellent example is the Medusa figure from the pediment of the ruined temple at Corfu.² These pediment figures are half round, and on the stone surrounding the figure of Medusa, and especially about her head, there are swarming snakes in low relief.



FIGURE 2.—THE DEATH OF MEDUSA: OENOCHOE OF AMASIS.

Around her forehead the hair is curled in heavy snail-shell curls suggestive of serpents, while on either side of her face, a large snake in high relief is crawling out from behind her head. There are also two snakes girt about her waist.

Again there are instances in which the individual artist provided Medusa or the Gorgon sisters with a serpentine ornament as on the black-figured oenochoe by Amasis (Fig. 2), or on a black-figured amphora in Triest.³ The same arrangement appears also on the figures of Phobos on the flange above the handles of

¹ Furtwängler-Reichhold, *Griechische Vasenmalerei*, pl. 131.

² Illustrations, *Πρακτικά*, 1911, pp. 172-173.

³ Gerhard, *Auserlesene Griechische Vasenbilder*, pl. LXXXVIII.

the François vase.¹ This form of snake decoration, probably of foreign origin, was not generally used, and evidently did not become a feature in any stock pattern. At any rate, in all three cases just mentioned, the snakes are a decorative feature and not, anatomically, a part of Medusa. They are not snakes growing in the hair.

What, then, do the monuments tell us about the origin, at least artistically, of this detail? While the huge grinning mouth and outstretched tongue were the most constant elements of frightfulness during the archaic period, there was developed at an early date, a tendency to make the creature more hideous and inhuman by a grotesque rendering of

the hair. Sometimes it is arranged about the face in alternate bands or scallops of black and purple, as on the Gorgon on the handle of a Corinthian crater in the British Museum, known as the "Amphiaraos Vase";² or on a mask decorating the centre of a cylix in the Bibliothèque Nationale.³ Sometimes the scallops are all black, but by



FIGURE 3.—GORGON ON AMPHORA: MUNICH.

means of incised lines are transformed into flat snaky curls, as on a mask decorating a cylix in the Berlin Museum,⁴ or one similarly used on a cylix in the Bibliothèque Nationale (Fig. 1).

A further development was the rendering of the hair in long serpentine locks radiating from the crown of the head, with the ends coiled about the forehead, as on an archaic antefix from the Athenian Acropolis (Fig. 4), or on a mask decorating a cylix in

¹ Furtwängler-Reichhold, *op. cit.* pls. 1 and 2.

² Furtwängler-Reichhold, *op. cit.* pl. 122.

³ DeRidder, *Cat. des Vases Peints de la Bib. Nat.* I, pl. IX.

⁴ Gerhard, *op. cit.* pl. CCLI, 3.



FIGURE 4.—ARCHAIC ANTEFIX: ATHENS.

This arrangement is reversed, and the serpentine appearance of the hair more strongly emphasized on a mask decorating the handle of a black-figured celebe in London (Fig. 5). Here the free ends are upstanding and coiled. The mask on a small



FIGURE 5.—MASK ON CELEBE: BRITISH MUSEUM.

coin of Lesbos seems to represent the last step in the development of snaky locks (Fig. 6). It would certainly require but slight expansion of creative fancy to pass from the rendering of hair shown on this coin to the actual fringe of serpents surrounding the head of Medusa on a red-figured amphora in Munich (Fig. 3), or to the similar fringe surrounding the mask decorating the shield of Athena on several vases of about the same period as this amphora.² Nor is there any abrupt change in passing from the coiled,

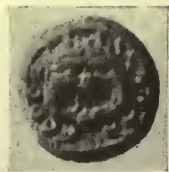


FIGURE 6.—COIN OF LESBOS.

¹ Lau, *Die Griechischen Vasen*, pl. XVII, 1, b.

² *E.g.* mask on a shield on a red-figured vase in Munich, Furtwängler-Reichhold, *op. cit.* pl. 22.

upstanding locks around the mask on the celebe in London (Fig. 5) to the hair actually coiled into serpents on a bronze mask found on the Athenian Acropolis (Fig. 7).

While the coiling locks were developing about the mask, the decorative use of snakes about the head of the full figure seems to have suggested snakes mingling with the hair, such as are found on the Gorgon in relief from the Temple of Apollo at Didyma,¹ which is claimed to be one of the earliest extant monuments on which this detail occurs.² So we see that the artists have changed the hair into snakes.

In the long preceding period of Gorgon representation, the artist adhered closely to the main features of the myth, but by a process of evolution he created a detail which it seems more than probable the myth accepted and absorbed into itself. The illustrations of this development here cited are only a very few of the immense number which existing works of art afford. It is not claimed

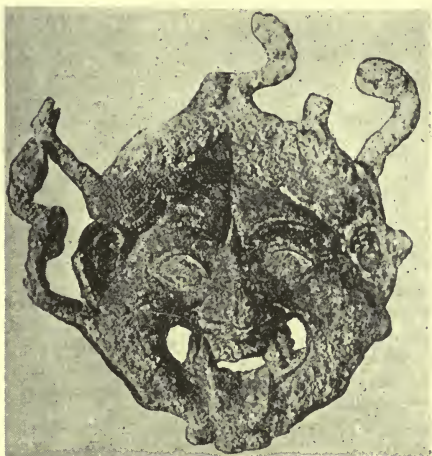


FIGURE 7.—BRONZE MASK FROM THE ACROPOLIS: ATHENS.

that any attempt has been made to follow a strict chronological order in presenting these illustrations, for such an undertaking would obviously be impossible of accomplishment. But it seems equally obvious that the examples here presented do constitute a sequence showing the development of the snake forms in the hair.

Evidently the assimilation of this detail by the myth was by no means immediate or even rapid. Had the snakes in the hair been a recognized part of the myth at the time of their first appearance in art, they would have become an essential feature, and when once developed, they would have been generally if not

¹ Pontremoli et Haussoullier, *Didymes: Fouilles de 1895 et 1896*, pl. XX.

² Mendel, *Cat. des Sculptures Gr., Rom., et Byzantines*, etc. (in the Museum of Constantinople), I, p. 559.

uniformly used. As a matter of fact, however, the Gorgon mask and the single full figure throughout the archaic and middle periods were represented quite as often without snakes in the hair and about the head as with them.

Beginning in the latter part of the fifth century, there was a tendency to soften the Gorgon or Medusa face. This tendency continued down into the late period of Greek art and culminated in the complete evolution of what is known as the beautiful type of Medusa. The earliest traceable example of this type was a bronze mask of which several marble copies exist, the best of them being the one known as the Rondanini mask. In the matter of Gorgon or Medusa representation, this bronze original was far in advance of its period, for it was not until many years after its probable date that the beautiful type became the usual one.

This type, of which many examples occur on gems, often of the Augustan age, is represented by a fine girlish head, characterized as Medusa solely by the snakes in her hair. It was not, therefore, until a late period that the constant use of snakes in this way bears witness to the accepted orthodoxy of this part of the myth.

Long before this time, the single full figure used decoratively had practically disappeared from Greek art, and at no time, not even in the period of the beautiful type, were the snakes, as a rule, found in the hair of Medusa or in any way connected with her in the decapitation scene, or in representations of Perseus carrying off the severed head of Medusa. The black-figured oenochoe by Amasis (Fig. 2) and the pediment figure from Corfu are notable exceptions to this general rule.

The second addition to the myth of which the monuments give evidence, is the assertion that the head of Medusa was fastened to the aegis of Athena. On this point, the evidence from the monuments is, in the nature of the case, of a negative character; and the scantiness of original material and the question of fidelity in existing copies make it necessary to speak with considerable reservation.

Like the snakes in Medusa's hair, this detail (the Gorgon mask attached to the aegis of Athena) does not appear in the earliest extant monuments. In black-figured vase painting the mask was often used on the shields of warriors, but rarely if ever on the shield of Athena. I have been unable to find a single instance of its use on the aegis of Athena in vase painting until the begin-

ning of the period of red-figured vases. A vigorous example of its use in this manner occurs on a red-figured vase by Andocides in the Berlin Museum.¹ In this case, the mask has all the traditional ugliness of feature. But the use of the mask on the aegis in vase painting was intermittent, and the rendering, as a rule, negligent and feeble, indicating that it was not accepted as a necessary part of the myth. As early as the latter part of the sixth century and the early part of the fifth, however, the mask was used on the aegis in sculpture with considerable vigor and sincerity.² But the extant remains of original sculpture of this period are too scanty to permit generalization as to the prevalence of this feature.



FIGURE 8.—MARBLE STATUETTE: ACROPOLIS, ATHENS.

However this may be, according to existing sculptures, the mask was not used on the aegis of Athena with anything like uniformity during the middle part of the fifth century, or from 470 to 440 B.C. Taken in connection with the similar omission in vase painting, this is further evidence that this detail had not yet become a part of the myth.

At about the period of the Parthenon, a change in this matter seems to have taken place. According to Pausanias there was a Gorgon mask on the aegis or breast of Athena Parthenos.³

¹ Furtwängler-Reichhold, *op. cit.* pl. 133.

² See Dickens, *Cat. of the Acropolis Museum*, Nos. 140, 142, and 625.

³ Pausanias I, 24, 7.

Other evidence is furnished by a presumably original statuette in the Acropolis Museum, belonging probably to a period within ten years after the Parthenon (Fig. 8). The mask on this statuette is of the archaic type so common on the fifth century coins of central Greece, excepting that the mouth is not distorted. Belonging to the period of this statuette, and later, is the relatively large group of statues of Athena known to us through Roman copies, and to which the Athena Velletri and the Farnese and Hope Athenas belong; and then, for the first time in Greek art, so far as we may judge from existing material, the mask was so generally used on the aegis as to make it an essential feature.

Was there a revival at this time of a forgotten portion of the myth, and did the sculptors respond by a proper representation in their statues? Or, as seems more probable, did the sculptors in this time of great artistic activity revive and beautify an old motive, purely as an artistic detail, and did the myth accept the amendment and explain its meaning?

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CHICAGO, ILLINOIS.

THE NATURE OF THE LARES AND THEIR REPRESENTATION IN ROMAN ART

*"Bina gemellorum quaerebam signa deorum
Viribus annosae facta caduca morae!
Mille Lares Geniumque ducis, qui tradidit illos,
Urbs habet, et vici numina trina colunt."*

—Ovid, *Fasti*, V, 143–146.

OID'S words may well serve as an introduction to one of the problems connected with the Lares. The poet represents himself as searching with increasing perplexity for the twin figures in which he had been accustomed to recognize the Lares. In their stead, he found innumerable groups composed of the two Lares Augusti with the Genius of Augustus between them. A Roman of earlier days, on the other hand, would have been equally surprised to find the number of the Lares restricted to two. In this paper I shall attempt a brief discussion of the reasons for the variations in the number of the Lares, and I shall also try to explain the differences in the representation of the Lares in Roman Art.

Following in the footsteps of De-Marchi,¹ Rohde,² Samter,³ von Domaszewski,⁴ and others, I regard, as the "original" Lar, the *Lar familiaris* in whom I recognize a good spirit, closely attached in each case to a particular family, to its dwelling, and to the territory immediately surrounding the house. The worship of this spirit, which centres in and about the family-hearth, contains many features which seem to point to a chthonic cult and which imply that the Lar was originally worshipped as the spirit of the ancestor who had founded the family and still watched with devotion over the fortunes of his descendants.

¹ *Il culto privato di Roma antica*, I, pp. 27 ff.

² *Psyche*, I, 1910, p. 254.

³ *Familienfeste der Griechen und Römer*, pp. 105 ff.; *Arch. Rel.* X, 1907, pp. 364 ff.

⁴ *Abh. zur römischen Religion*, p. 174.

Not only in the house but at the *compita*, or crossroads, another great centre for chthonic cults, these protecting spirits were worshipped. Here they were supposed to congregate in indefinite numbers, corresponding perhaps to the numbers of the adjoining estates.¹

The Roman community as a whole was protected by similar deities. These *Lares praestites* were represented as twin youths. Working retroactively, the state-Lares in their turn exercised influence upon the Lares of the *compita* and dualized also the *Lar familiaris*.² Between the twin Lares of the *compita*, after the reforms of Augustus, appeared the Genius of the Emperor. Lastly, between the twin Lares of the household was placed the Genius of the master of the house,³ in a few instances⁴ supplanted by the Genius of the Emperor.

As this view is directly opposed to that repeatedly expressed by Wissowa,⁵ I shall give briefly the chief objections raised by this great authority and the answers which I think may be made to them.

Wissowa's theory,—that the Lar is attached always to places, not persons; that he is in the beginning a spirit not of the family but of the farm,⁶ and especially of the boundaries of the farm represented by the cult of the crossroads; that he has no connections with the cult of ancestors or of the dead,⁷—is supported by the following considerations:

1. The comparatively late origin of the belief that the Lares represented the souls of dead ancestors. All our oldest references,

¹ In this connection, I am disposed to accept, against Samter, the conclusion of Wissowa (*Religion und Kultus der Römer*, (1912) p. 167 and note³) that the shrines discussed by Dolabella (*Grom. lat.* I, p. 302, 20 ff.) are identical with those of the Lares at the *compita*. These shrines are described as having entrances and altars corresponding to the number of estates adjoining.

² This change, it would appear from *Rudens*, 1207, must have occurred as early as Plautus; but cf. Jordan (*Annali*, 1872, p. 39) who places it after Pomponius (*flor.* 88 B.C.). Possibly the beginning of the development may be dated from Plautus, the complete change from Pomponius. Wissowa would assign it to the reforms of Augustus (*Arch. Rel.* VII, 1904, p. 48).

³ The Genius of the master had of course received worship by itself before Augustus. Cf. Plautus, *Captivi*, 290 ff.; De-Marchi, p. 75.

⁴ *Röm. Mitt.* V, 1890, p. 244; Mau-Kelsey, *Pompeii* (1907), p. 270.

⁵ Roscher, *Lex. d. Myth.* II, 2; s. v. *Lares*; *Arch. Rel.* VII, 1904, pp. 42 ff.; *Rel. u. Kult.* pp. 166 ff.

⁶ *Arch. Rel.* VII, pp. 49 and 56.

⁷ *Rel. u. Kult.* p. 174.

according to Wissowa, deal exclusively with the Lares as guardians of the farmer's fields.¹ Such are the prayers of the Arval brothers, the inscription on the *ara Consi* quoted by Tertullian, and the *devotio* of *Decius*. To the fields also belongs the oldest festival connected with the cult,—the Compitalia.

2. The difficulty of finding a place for the Lares in the house-cult and of distinguishing them in function from chthonic conceptions like the *di Manes* and the *di parentes*, or from Vesta, goddess of the hearth.²

3. The prominence given to slaves in the worship of the Lares,³ a prominence which Wissowa considers absolutely unthinkable if the origins of the cult are to be traced to the worship of ancestors.

In general, says Wissowa, the idea that the Lares were identical with the deified ancestors of Roman families did not prevail until the time of Varro.⁴ Wissowa himself however quotes Plautus, *Mercator*, 834, *di penates meum parentum, familiai Lar pater*, as a passage seemingly at variance with his argument,⁵ but declares it contradicted by *Mercator*, 836,—*Ego mihi alios deos penates persequar, alium Larem, aliam urbem, aliam civitatem*, etc.

To say nothing of the possible comic effect which the lines may have been intended to have, as the speech of a desperate young man minded to attempt the all but impossible, it would doubtless be conceivable to a Roman audience that a man could, under certain exceptional circumstances, secure another Lar. Was it not accomplished in the ceremony of *adoptio*?⁶

As for the early references in the songs of the Arvals and in the *devotio* of *Decius*, Samter⁷ has proved the appropriateness of

¹ *Arch. Rel.* VII, pp. 48 f.

² *Arch. Rel.* VII, pp. 43 ff.

³ Roscher's *Lex. l. c.*, p. 1890.

⁴ *Arch. Rel.* VII, p. 42 and note.

⁵ *Lar familiaris* in this passage, as in the prologue to the *Aulularia*, is probably a translation of *ἡρως*. See Leo in *Hermes*, XLIII, 1908, p. 127. Wissowa would consider this equation as due, not to the fact that the Lar was an ancestral spirit, but to the gradual introduction of the Lar from the field to the house-cult. See *Rel. u. Kult.* p. 169.

⁶ If we choose, however, we may, following Samter (*Arch. Rel.* X, 1907, p. 372²), regard Lar as used metaphorically to mean simply "house," and thus procure a satisfactory climax,—*Larem, urbem, civitatem*.

⁷ *Arch. Rel.* X, p. 389; *Familienfeste*, p. 117.

calling on the Lares to protect and bless the Roman fields, since, if they represent the souls of deified ancestors, they were probably regarded as especially able, like other chthonic deities, to bring increase to the crops.¹ The same considerations apply of course to the inscription on the altar of the harvest-god Consus, and the efficacy of Decius's appeal to the Lares, if they were the souls of his ancestors, hardly needs comment. The appeal to the Lares among other divinities when the Arvals made an expiatory offering would be equally natural. To the meaning of the Compitalia I shall later recur.

Wissowa's well-known reluctance to turn for aid and analogies to the folklore of other peoples is partly responsible for his tendency to regard the Lar as attached exclusively to places, not to persons.

Examples drawn from the conduct of the house-spirits of Northern Europe are interesting because, although they illustrate just such fond devotion to the farm and the farmstead as Wissowa emphasizes in the case of the Lar, they also prove that the main object of attachment in such cases is not the house, but the family occupying it. Many of these tales rouse one's sympathy for the much-tried farmer who unsuccessfully endeavours to rid himself of a too-devoted house-spirit. At last, the family in desperation sets off for a new home, only to hear from one of the drays which bear their goods and chattels the triumphant cry of the brownie who has succeeded in accompanying them.² That in Roman belief also the Lar could be transferred with the family to a new home is proved by the well-known passage in *Trinummus*, 39 ff.³

Wissowa⁴ goes too far also in distinguishing between the Genius and the Lar on the ground that the Lar is never attached to persons so that expressions such as *Genio Marci nostri*, *Manes Silanorum*, etc., could never be used in connection with the Lares.

¹ Cf. Domaszewski, *Abhandlungen*, p. 174:—"Diese Ahnherrn hatten einst die Ackerflur ihres Fundus dem Walde abgerungen. Sie wirken fort als Schützer ihrer Flur."

² Cf. Grimm, *Deutsche Myth.* p. 424³.

³ See also Ovid, *Fast.* IV, 802; Tibullus, II, 5, 42; and Samter, *Familienfeste*, p. 108. Cf. Ralston, *Songs of the Russian People*, pp. 120 f.:—"When a Russian family moves from one house to another, the fire is raked out of the old stove into a jar and solemnly conveyed to the new one, the words, 'Welcome, grandfather, to the new home!' being uttered when it arrives."

⁴ *Arch. Rel.* VII, p. 56.

For not only the Lares Hostilii¹ and the Lares Volusiani,² but the Lares Augusti themselves show the possibility of attaching to the Lares a personal appellative.³

The Lar as the single deified founder of the family stands in a place apart, and easily distinguished from that occupied by the *di Manes*, the souls of the dead in general, and the *di parentes*, the dead descendants of the Lar.⁴ Neither is the function of the Lar comparable to that of Vesta, though as he makes his home in or near the hearth, there was undoubtedly a connection between him and the great goddess of the house-fire.⁵ It is noticeable, for instance, that both Servius and Romulus were supposed to be sons of the Lar by virgins. In the case of Servius, the maiden Ocrisia was offering sacrifice at the hearth of the palace when her destiny was revealed to her by the Lar in phallic form;⁶ in the case of Romulus, the punishment threatened the virgin is averted by Vesta who appears to the wrathful king of Alba in a dream.⁷ A somewhat similar story is told of Caeculus, founder of Praeneste, who was the son of a maiden impregnated by a spark from the hearth-fire.⁸ In this instance, we note the substitution (regarded by Wissowa as late and of

¹ Paulus, p. 102; cf. W. F. Otto, 'Mania und Lares,' *Arch. f. lat. Lex.* XV, 1908, p. 120.

² *C. I. L.* VI, 10266 f.

³ The plural in *Lares Hostilii* proves to Wissowa that the Lares here are not the ancestors of the *gens Hostilia*, but the Lares as attached to the estate of the Hostilii. (*Rel. u. Kult.* p. 169³.) But the plural may equally well be explained as the duplication of the *Lar familiaris* brought about by the worship of the Lares at the *compita*.

⁴ So the Lares do not receive worship on the Parentalia except at the Caristia or love-feast of the family, where they are undoubtedly present merely as family-gods, without connection with the dead. For, as Mommsen (*C. I. L.* I, 1, [ed. 2] 309) believes, the Parentalia belong to a late period when the dead were thought of as kindly and harmless beings, removed from the ordinary life of the family, and safely buried in their tombs. In considering such a festival, we are far distant from the epoch when the Lar was consciously regarded as an ancestor who dwelt beneath the hearth and must be carefully, at times even anxiously, propitiated.

⁵ In the *Aulularia*, 7 and 8, the person who entrusts his treasure to the Lar, *in medio foco defodit*.

⁶ Plutarch, *de fort. Rom.* 10; Dion. Hal. *Antiq. Rom.* IV, 2; Ovid, *Fasti*, VI, 627-636; Pliny, *N. H.* XXXVI, 204; Arnobius, *Adv. Nat.* V, 18; and cf. Preller, *Röm. Myth.*³ II, p. 344.

⁷ Plutarch, *Vit. Rom.* 2.

⁸ Virgil, *Aen.* VII, 678 ff.; X, 544; Cato quoted by Schol. Veron, *ad Aen.* VII, 681; Servius, *ad Aen.* VII, 678; Solinus, II, 9.

Greek origin) of Vulcan for the Lar.¹ Pertinent also are the words of Pliny (*N. H.* XXVIII, 39): *fascinus . . . deus inter sacra Romana a Vestalibus colitur*.

Such stories bring into prominence one of the chief characteristics of the *Lar familiaris*,—his generative power. Here again a Roman tradition may be illuminated by foreign parallels.² In one of the instances quoted above, the hearth-god appeared in the form of a spark of fire, and the examples collected by Frazer³ show the wide prevalence of the belief in the procreative force of fire and of fire-spirits, and the universality of the idea that the hearth is the abode of deified ancestors. It is interesting also to note that in the Polish tale quoted by Grimm to illustrate the persistence of the household spirit in clinging to a particular family⁴ the name of the brownie is Iskrzycki, translated by Grimm as "*funke, feuerstein*," and he lives in the family-stove. In this he resembles his Russian relative, the Domovoi,⁵ and other house-spirits.

The unique privileges given to slaves in the cult of the Lares constitute no argument against the conception of the Lar as a deified ancestor. If the Roman encouraged slaves to worship their master's Genius, to make offerings in its honor, and to swear by it, he would surely see no objection to their sacrificing in honor of the Lar, who was regarded as so close in nature to the Genius that the two were even identified.⁶

Slaves, too, as Samter remarks,⁷ would be especially likely to take part in cults pertaining to the farmhouse and the kitchen, to which a large part of their activities would naturally be confined. In consonance with this assumption, Germanic house-spirits help especially in the work of the kitchen and stable. Like Milton's Lubber-fiend, the most illustrious of their clan, they toil for grooms and maids to "earn a cream-bowl duly set," keeping meantime, like the Lar of the *Aulularia*, a watchful eye on the treasures of the house.⁸

¹ This substitution appears as an alternative tradition in the legend of Servius.

² The universality of such beliefs is an argument against attributing the Roman traditions to a Greek origin, as Wissowa is inclined to do. See Otto, '*Mania u. Lares*', p. 118.

³ *Golden Bough*³, II, pp. 221 ff.; 230 ff.

⁴ See p. 244, note 2.

⁵ Ralston, *Songs of the Russian People*, pp. 119 ff.

⁶ Censorinus, *de die natali*, III, 2.

⁷ *Familienfeste*, p. 119.

⁸ Grimm, *op. cit.* pp. 422 ff.

But the connection between the slaves of a Roman household and the Lares seems peculiarly significant. The mother of Servius Tullius was a slave; the mother of Romulus in the similar story was a handmaid, who was moreover forced to take the place of her reluctant mistress, the princess whom King Tarchetius had intended to be the bride of the phallic Lar.¹ The *vilicus* was forbidden to take part in religious rites except at the Compitalia or festival of the Lares.² Dionysius emphasizes the important position given to slaves at this time. The festival in fact was established by Tullius, the slave's son, who τοῖς . . . τὰ περὶ τῶν γειτόνων ἱερὰ συντελοῦσιν ἐν τοῖς προνωπίοις οὐ τοὺς ἐλευθέρους, ἀλλὰ τοὺς δούλους ἔταξε παρῆναι τε καὶ συνιερουργεῖν, ὥς κεχαρισμένης τοῖς ἥρωσι τῆς τῶν θεραπόντων ὑπηρεσίας.³

On the night before the festival, woolen images representing the free members of the household and balls⁴ representing the slaves were hung up at the *compita* and before the house-doors as an offering to the Lares. The effigies and balls were intended, says Paulus,⁵ as a surrogate, *ut vivis parcerent et essent his pilis et simulacris contenti*. Macrobius⁶ adds that a sacrifice was originally made not only to the Lares but to Mania who, as Varro tells us,⁷ was the mother of the Lares. It was instituted by Tarquinius Superbus as a sacrifice of slaves *pro familiarium sospitate*; and, according to Macrobius, a gentler mode of celebration, involving the substitution of heads of garlic and poppy for human heads and the offering of images to Mania before the doors, was due to Junius Brutus.

At the Larentalia, a chthonic festival celebrated about the same time (December 23) at the grave of Acca Larentia, also identified by some scholars with the mother of the Lares,⁸ a mutilated note of Varro's⁹ informs us that a sacrifice was made to the spirits of dead slaves.

¹ Plutarch, *Vit. Rom.* 2.

² Cato, *de Agr.* V, 3. For the *vilica's* offering to the Lares on Kalends, Nones, and Ides, cf. *de Agr.* CXLIII, 2.

³ *Antiq. Rom.* IV, 14.

⁴ That these *pilae* may themselves have been images is shown by Samter, *Arch. Rel.* X, p. 383³.

⁵ P. 239; cf. p. 121, 17.

⁶ *Sat.* I, 7, 34.

⁷ *Ling. Lat.* IX, 61.

⁸ The identification is strenuously opposed by Wissowa, in Pauly-Wissowa, s. v. *Acca*, pp. 133 f. It is supported by Müller-Deecke, Schwegler, Preuner, and Preller. See Wissowa's references, l. c.

⁹ *Ling. Lat.* VI, 24; *faciunt dis manibus servilibus sacerdotes*.

Finally, Acca Larentia herself shares in the taint of lowly birth, for she was supposed to have been a *meretrix*, forced, like the mothers of Romulus and Servius, to marriage with a god, in this instance Hercules.¹

Both the Larentalia and the Compitalia were, as von Domasewski has observed,² under the influence of the Saturnalia. Anxiety for the fate of the seed was mingled with awe and reverence for the dead who, themselves hidden beneath the earth, might forward or retard the growth of the crops. As in many other countries, a period of carnival magically aided by its freedom and license the development of plant life. Frazer has conjectured³ that the Saturnalia may have originated in an intercalary festival, regarded, like such festivals in general, as an unlucky season when the ordinary rules of life were inverted.

Curious reversals of regular custom marked at any rate the days of the Saturnalia. One of the most astonishing features of the festival was the liberty allowed to slaves. They took their masters' places, sat at table waited on by their lords, and assumed in the household all the dignity and power usually displayed by their owners.⁴ The same procedure marked the Cronia and other Greek festivals,⁵ and Dionysius seems to hint at something of the same sort by the following passage on the Compitalia:⁶ ἦν ἔτι καὶ καθ' ἡμᾶς ἑορτὴν ἄγοντες Ῥωμαῖοι διετέλουν ὀλίγαις ὕστερον ἡμέραις τῶν Κρονίων, σεμνὴν ἐν τοῖς πάνι καὶ πολυτελῇ . . . καὶ φυλάττουσι τὸν ἀρχαῖον ἔθισμόν ἐπὶ τῶν ἱερῶν, διὰ τῶν θεραπόντων τοὺς ἥρωας ἱλασκόμενοι καὶ ἅπαν τὸ δοῦλον ἀφαιροῦντες αὐτῶν ἐν τοῖς ἡμέραις ἐκείναις, ἵνα τῇ φιλανθρωπίᾳ ταύτῃ τιθασσεύομενοι μέγα τι καὶ σεμνὸν ἔχούσῃ χαριέστεροι γίνωνται περὶ τοὺς δέσποτας, καὶ τὰ λυπηρὰ τῆς τύχης ἥττον βαρύνωνται.

When one remembers that during this same festival effigies were offered at the crossroads, a chthonic centre, to divert the attention of the Lares and Mania and cause them to spare the living,⁷ one is led to the conjecture that possibly slaves at this season were scapegoats for their masters and took for a brief

¹ Macr., *Sat.* I, 10, 11 ff.

² *Abh.* p. 174.

³ *Golden Bough*, VI, p. 339.

⁴ Macrobian. *Sat.* I, 7, 26; I, 24, 23; Horace *Sat.* II, 7, 4; Seneca, *Ep.* 47, 14.

⁵ Athen. XIV, 44 f., pp. 639 B, 640 A.

⁶ IV, 14.

⁷ Cf. the explanation given by Macrobius (I, 7, 31) of the *Sigillaria* used as presents during the Saturnalia.

hour their places and privileges, not for the reason given by the kindly Dionysius, but to give their lords a further chance to deceive the lurking spirits by satisfying them with humbler prey.¹

The offering of woolen effigies corresponding in number to the free inhabitants and of balls for the slaves of each household does not, of course, entail the ridiculous consequence suggested by Wissowa² that those who regard it as a surrogate must hold that originally all members of the household were sacrificed to the angry deities. The images were doubtless intended merely, like the beans of the Lemuria, to attract the attention of the spirits³ and divert them from their possible intention of seizing or harming some member of the family, each of whom was thus protected. An image might be a satisfactory substitute for a man. If, however, the precaution proved vain, then the disguise of the slaves as freemen might be of efficacy in deluding the denizens of the underworld, and a slave might be seized instead of his master. The sacrifice to the Manes of slaves is likewise explicable, if the slaves during this cycle of festivals were really representatives of their masters.

I hold, then, that none of Wissowa's objections to considering the Lares as the souls of ancestors is cogent.⁴ If the account of the development of the cult which I have suggested above is

¹ Many parallels might be adduced to illustrate the feeling of primitive peoples that dead ancestors, though a source of fertility and so of blessing, are also jealous spirits, liable to injure even their kindred. Cf. Frazer, *Belief in Immortality*, I, pp. 130, 153, 173, 247, 258, 298. The capriciousness of the modern brownie may perhaps show a survival of this belief.

² *Rel. u. Kult.* p. 167⁶.

³ Often at similar festivals food is offered to spirits with a like propitiatory purpose. Cf. Schol. Aristoph. *Frogs*, 218, and J. C. Lawson, *Modern Greek Folklore and Ancient Greek Religion*, p. 201; Ralston, *op. cit.* p. 134.

⁴ One may query why, if the hearth or the space beneath it was associated, perhaps as an original burial-place, with the cult of ancestors, it was connected in worship with a single ancestor only, the *Lar familiaris*. To this one may answer that the *Lar familiaris* was rather the personification of the Ancestors embodied in the founder of the family, than an individual. It is to the *ius imaginum* that we must look for individualized ancestors. This is perhaps the reason why the word *Lar* meant to the Roman "house," "home," "family-traditions" as well as "family-god." The vagueness of the concept would explain also why the *Lar* so readily accepted pluralization. Even Plautus (*Rudens*, 1207) uses *Laribus familiaribus* in an inaccurate plural for all the gods venerated at the hearth.

So the Genius of the father of the family was the only Genius which received worship from all the members of the household, though each male had his own Genius. Similarly, too, the Russian Domovoi (Ralston, *op. cit.* p. 120) is

correct, we may draw an interesting parallel with the evolution of Hermes from a θεὸς μύχιος or ἐφέστιος to a θεὸς πύλαιος and ἀγοραῖος and also to a θεὸς προπύλαιος and a θεὸς ἐπιτέρμιος.¹

Neither of the *Lar familiaris* nor of the Lares in their other aspects as gods of the *compita* and protectors in general of the Romans and their city do we find representations in art until Greek influences have absorbed and modified the original conception.

There was, however, a well-established tradition² that an altar to the *Lares Praestites* had been founded in Rome as early as the days of Titus Tatius. Ovid³ and Plutarch⁴ both describe the ancient *signa* of the Lares, statues which despite their age, must, as Wissowa has shown,⁵ belong to a comparatively late period when the ancient open altar had been replaced by a temple and images after the Greek model. As neither Ovid nor Plutarch appear themselves to have seen the statues of the Lares, it is probably to Varro that we owe the description of them as two standing youths with a dog, also standing, between their feet. Plutarch adds that the Lares themselves were dressed in dog-skins. Both suggest as a reason for the presence of the dog the character of the Lares as guardians, and we may remember the attribution of a dog to Silvanus who is often closely connected and even confused with the Lares.⁶ Some authorities⁷ the chief representative of the ancestors, though in some districts the spirits of the dead usurp his functions. Among the Hereros (*Golden Bough*³, II, p. 221) the ancestral spirits at the hearth are often addressed in the plural; but, when a sick man is borne round the fire, his friends chant:

"See, Father, we have come here,
With this sick man to you,
That he may soon recover."

¹ M. B. Ogle, review of Eitrem, *Hermes u. d. Toten* (a work to which I regret that I have not had access) in *Am. Jour. Philol.* XXXI, 1910, pp. 93 ff.

² Varro, *Ling. Lat.* V, 74.

³ *Fasti*, V, 129 ff.

⁴ *Aet. Rom.* 51.

⁵ See Roscher's *Lexikon*, s. v. *Lares*, p. 1871.

⁶ *Rel. u. Kult.* p. 214. The dog also appears with the Dioscuri on Roman denarii of ca. 217–197 B.C. See Grueber, *Coins of the Roman Republic in the British Museum*, I, p. 58. As the dog, however, is in frequent use as a symbol of the gens *Antestia* (p. 114), it is doubtful whether the denarii mentioned may not have been coined by a member of the gens, in which case the animal would have no particular connection with the Dioscuri.

⁷ Jevons, *Roman Questions*, Introduction, p. XLI, and Ehrlich, *Zeitschr. f. vergl. Sprachforsch.* XLI, 1907, p. 298.

even advance the theory that the Lares themselves were originally worshipped in the shape of dogs. No trace, however, of such a worship appears in the cult of the *Lares domestici*, and in general house-spirits are not symbolized by this animal.¹ The use of dogs in chthonic cults is on the contrary well attested, and when we remember that Hecate, goddess of the dead who gather at the crossroads, was represented as a dog,² and that dogs were sacrificed to Genita Mana,³ a goddess whose close relation to Mania and the Manes is undoubted, the presence of the dog with the *Lares praestites* seems clearly to indicate the chthonic side of their nature.⁴

On the reverse of coins of the gens *Caesia* (Fig. 1), issued 104 B.C., sit two youths draped round the waist and grasping spears. Between them is a dog and in the field is the inscription in monograms LARE, while above appear the head and tongs of Vulcan. Although evidently influenced by the ancient statues of the *Lares praestites*, these youths are seated instead of standing like the figures which Ovid described. The dog also sits, whereas in Ovid, *canis ante pedes saxo fabricatus eodem stabat*. The type of the Lares here is plainly Dioscuric.



FIGURE 1.—THE LARES: DENARIUS OF L. CAESIUS.

From the representation on the coins of the gens *Caesia* differ all other known artistic conceptions of the Lares. Bronze statues, altar-reliefs, Pompeian *lararia*, shrines at the *compita*, and wall-paintings unite in representing the Lares as curly-haired youths with high-girt tunics and boots. Their hands hold various attributes of peace and plenty, such as rhyta, paterae, horns of plenty, etc.

Of this type Friederichs further distinguishes two sub-classes.⁵ The youths of the first hold a cornucopia and patera, or, instead of the latter, wheat-ears (Fig. 2, A). The Lares in this group always appear clad in a chiton and mantle. In the second group, they pour liquid from a rhyton, held high in the right hand, into a patera or similar receptacle in the left hand (Fig. 2, B). They

¹ The cat, on the other hand, hence our "Puss in Boots," is frequent in this connection. See Grimm, *op. cit.* p. 416.

² Rohde, *Psyche*, II, p. 83³.

³ Plutarch, *Aet. Rom.*, 52.

⁴ See Fowler, *Roman Festivals*, p. 101.

⁵ *Berlins antike Bildwerke*, II, pp. 438 ff.

often wear the chiton only, and advance in pairs with a jovial dancing-step, whereas Class I shows a more quiet posture. Although the first class so markedly resembles the undoubted Lares of the second class, the attribution is not attested by inscriptions, and Wissowa's conjecture¹ that the single quiet



FIGURE 2.—STATUETTES OF LARES: A, PRE-AUGUSTAN TYPE; B, DANCING LAR.

figures may be *Lares familiares* of the pre-Augustan age therefore lacks proof.

Confining ourselves, then, to Class II and to the type seen on the coins of the *gens Caesia*, let us endeavor to decide (1) why the Lares were portrayed in forms which suggest the Dioscuri; (2) why this warrior-type is so much rarer than the other; and (3) what considerations influenced the choice of the commoner representation.

1. It was not unnatural that a connection between the Lares and the Dioscuri should occur to the Roman mind. The Dios-

¹ Roscher, *Lexikon*, s. v. *Lares*, p. 1894.

curi, like the Lares were, in one aspect, house-spirits,¹ although their guardianship was in general rather over the door than the hearth.² Door and hearth, however, are in folklore most intimately associated,³ and more than one bit of evidence may be adduced to prove the connection of the Lares with entrances.⁴

The chthonic aspect of the Dioscuri would also lead to their identification with the Lares, as would the belief in their efficacy as saviors and protectors both of individuals and of the state.

2. The reason for the choice of another type to represent the Lares may well have been the danger of confusion with the Penates whose statues in the state shrine on the Velia, as described by Dionysius⁵ prove their artistic affinity to the Twin Brethren. Judging from the coins of C. Antius Restio⁶ and of the Sulpicii and Fonteii,⁷ the resemblance was even closer than in the case of the Lares. If Wissowa's conjecture,⁸ that in Tusculum also the Penates of the community were represented as Dioscuri, be

¹ See Nilsson, *Griechische Feste*, p. 419: "Die Dioskuren sind aber keine Götter bestimmter Geschlechter; ihre Kult ist vielmehr ein Hauskult, zu dem jedermann die gleiche Berechtigung hatte. Damit stimmt die Form des Opfers, denn auch die Theoxenien sind ein Opfer. Den Hausgeistern wird ihre Nahrung von den Hausgenossen dargebracht; man wird versucht die Hauskölde des germanischen Glaubens und die ihnen vorgesetzten Mähle zu vergleichen."

² They are, however, sometimes termed 'Εφέστιοι. See Lobeck, *Aglaophamus*, p. 1237.

³ For a possible explanation, see Trumball, *Threshold Covenant*, p. 22.

⁴ Several Pompeian houses show traces of *lararia* or similar shrines near the entrance. So Mau (*Röm. Mitt.* VIII, 1893, p. 7; see also p. 9, casa c; Overbeck⁴, p. 315; *Gior. degli Scavi*, 1870, p. 10) notes of a house in Pompeii without compluvium or impluvium that immediately to the right on entering the door was a low altar with traces of fire, while above was a niche in the wall for the Lares. An interesting passage from St. Jerome (*In Esaiam* c. 57, Vol. III, p. 418, ed. Bened.) proves for late antiquity the presence of statues of the goddess Tutela at the entrances both of private houses and of insulae. This goddess appears occasionally (*C. I. L.* II, 4082; *Eph. Epig.* IX, 440) with the Lares, and in such cases is evidently a deification of their protecting power. It is possible that Propertius, IV (V), 8, 50, may refer to a shrine of the Lares at or near an entrance. It should be noted that the first part of the passage from Jerome, though used by De-Marchi, Marquardt and Mommsen to prove the presence of the Lares near the entrance, refers, as the context shows, to the Israelites and can only by inference be applied to the Romans.

⁵ I, 68.

⁶ Babelon, *Monnaies de la Répub. rom.* I, p. 155, No. 2.

⁷ Ibid. II, p. 471; I, p. 503.

⁸ 'Die Überlieferung über die röm. Penaten,' *Hermes*, XXII, 1887, p. 32.

correct, the very ancient interest of Tusculum in the Dioscuri would argue for the early adoption of the type there. It may therefore have seemed to the Romans that the Penates had, as it were, a prior right to identification with the Dioscuri, and that, as confusion existed, another equation for the Lares must be found.

An existing type was apparently ready at hand, for a fragment of the *Tunicularia* of Naevius¹ recalls the painter *Theodotum compellas* [*compella* Scaliger] . . . *qui aras Compitalibus sedens in cella circumtectuas tegetibus Lares ludentis peni pinxit bubulo*. If the usual interpretation of this passage is correct,² even before the time of Naevius the Lares were represented in some such jovial guise as their later Pompeian brethren present. It was, of course, just at this period that attempts to equate Greek and Roman divinities began to be frequent.

The usual explanation is that given by Wissowa,³ that the so-called "dancing Lares" are derived from a late Greek type of Bacchus probably common in South Italy in Naevius's day.

We may note first that the figures of the Lares do not so much resemble the ordinary conceptions of Dionysus as they do those of members of the wine-god's train. Friederichs⁴ has remarked the subordinate character of the "dancing Lares" and the way in which they group themselves on either side of the Genius as the main figure. Now if the idea of the evolution of the Lares presented in this article is correct, they were not at first subordinated to the Genius or any other divinity, but appeared in indefinite numbers at the *compita* as protectors of the adjoining estates and as representing the cult of the ancestors. It was not, indeed, until after the reforms of Augustus that the Genius became common as the central figure. Whence, then, their peculiar lack of independence?

It is not likely to have been a later development, derived from association with the Genius, for the type, if we may trust Naevius, was an early one.

A study of the Dioscuri, such as I have previously attempted,⁵

¹ Ribbeck, *Com. frg.* 99 ff.

² A different interpretation is given by Ehrlich, *Ztschr. f. vergl. Sprachf.* XLI, 297 f.

³ 'Monumenta ad religionem Romanam spectantia tria,' *Ann. dell' Inst.* 1883, pp. 159 f.; *Rel. u. Kult.* p. 172.

⁴ *Op. cit.* p. 439.

⁵ *A. J. A.* XXIII, 1919, pp. 1 ff.

shows that pairs of divinities are quite likely to be subordinated to a central and more important god. Does the explanation of our problem lie in the influence of the other class of Lares, already equated with the Dioscuri? In favor of this answer would be the fact that the "dancing Lares" are two in number like those on the coins of the *gens Caesia*, where the influence of the Dioscuri is apparent. We might then see a sort of transition-type in the statue of a dancing youth in the Louvre¹ who is clothed in a skin tunic, girt apparently with an animal's tail. He holds in his right hand a rhyton terminating in a dog's head and in his left a patera. Longpérier identifies the bronze as a Lar, though, as in the case of many similar figures, there is no inscription to assure us as to the intention of the sculptor.

But if this conjecture is justified, why was the Dionysiac type chosen for the Lares? Wissowa's idea that the Lares in this aspect are heralds of the mirthful Compitalia is hardly applicable. In fact his inference as to the joyousness of the Compitalia is not supported by his references.²

A more profitable line of investigation would seem to be the study of a possible relation between the Lares and Liber, originally a *Genius genialis*, embodying the concept of creative fullness.³ In the cult of Liber, as in the traditions associated with the *Lar familiaris*, the phallus played an important part; Liber, like the Lares, received worship at the crossroads,⁴ and the later merging of Liber and the Greek Dionysus might foreshadow the type of the "dancing Lares." The number and subordinate character of the "dancing Lares" would, according to this supposition, be derived from connection with the Dioscuri; the type from the resemblance in nature between the Lares and Dionysus-Liber.

Much more satisfactory, however, would be a derivation which should include the two elements. If we could find a pair of Greek deities of subordinate character, who might be represented in a

¹ Longpérier, *Notice des bronzes antiques*, p. 103, no. 464; Daremberg et Saglio, s. v. *Diphthera*, fig. 2451.

² *Rel. u. Kult.* p. 167^b. Even if we grant that such a phrase as *uncta Compitalia* (Virg., *Catal.* XIII, 27) points to a lavish and therefore joyous banquet, we must acknowledge, as Samter points out (*Arch. Rel.* X, 1907, pp. 384 f.), that a noisy feast is, even in modern times, by no means incompatible with a celebration in honor of the dead.

³ *Rel. u. Kult.* p. 120; see Reifferscheid, *Annali*, 1863, p. 134.

⁴ Augustine, *De Civitate Dei*, VII, 21.

guise suggesting a Dionysiac type; if we could prove that these deities resembled the Lares in function to an extent sufficient to warrant identification; and, finally, if we could show that these divinities were known in Italy about the time of the Hannibalic War, we might with a fair degree of probability assume the derivation from them of the "dancing Lares."

These specifications are, I think, fulfilled by the Cabiri or Megaloi Theoi.¹ The cult attained a great reputation in Rome even in Republican times, as is shown by the offering made at Samothrace by Marcellus, conqueror of Syracuse.² The widespread identification in the Hellenistic period of the Samothracian Cabiri and the Dioscuri combined with the stories of Aeneas to produce the Roman equation Cabiri = Dioscuri = Penates. As we have seen, the Penates in their shrine in the Velia were portrayed as Dioscuri, and the inscription in the temple described them, like the Cabiri, as *Magni di*.³

This particular type of Dioscuri-Cabiri, though chosen also for the Lares, could not, I have concluded, persist because of the inevitable confusion which would arise between the Lares and the Penates.

But there were many other Cabiric cults beside that on Samothrace, and the surprising variations which occur in the other centres were combined with true eclecticism by Roman worshippers. So in an inscription⁴ found on Imbros the dedicant, a Roman as Bloch has observed, has heaped upon the Cabiri a singular jumble of complimentary epithets:

Θεοὶ μεγάλοι | θεοὶ δυνατοὶ | ἰσχυροὶ καὶ | Κασμεῖλε | ἄναξ Πάτ[εκ]οι⁵
Κοῖος | Κρεῖος Ὑπερίων | Εἰαπετός | Κρόνος.

The inscription produces, as Keil⁶ well remarks, the effect of an Orphic prayer,—an effect which is increased by comparison with Orphic fragment VIII:

τίκτει ἡ γῆ . . . παῖδας . . . ἄλλους τοσούτους,
Κοῖόν τε Κροῖόν τε μέγαν, Φόρκύν τε κραταῖόν,
καὶ Κρόνον, Ὠκεανόν θ', Ὑπερίονά τ', Ἰαπετόν τε.

¹ The identification of the Lares with the Curetes and of these with the Cabiri was frequent in antiquity. See Lobeck, *Aglaophamus*, pp. 1178, 1236.

² Plutarch, *Marc.* 30. For further evidence see *I.G.* XII, 8, pp. 38 ff.

³ Serv. *ad. Aen.* III, 12.

⁴ See Bloch in Roscher, *Lexikon*, s. v. *Megaloi Theoi*, p. 2533.

⁵ Friedrich reads πᾶτ[ρι]οι. See Kern, in *Pauly-Wissowa*, s. v. 'Kabeiros und Kabeiroi,' p. 1410.

⁶ *Philologus*, suppl. 2, p. 601.

In harmony with this impression is the fact that on Samothrace the two Cabiri were often regarded as Dionysus and Zeus,¹ while at times Dionysus was called "son of the Cabir."² In Thebes, too, Dionysus was the centre of the cult.³

At Lemnos, on the other hand, perhaps the most ancient home of the Cabiri, they were represented as subordinate protecting spirits, guardians especially of the vintage.⁴ These Lemnian Cabiri are introduced by Nonnus (*Dionys.* XIV, 17 ff.) into the army of Dionysus. On this island the chief Cabir was Hephaestus who seems also to have been recognized as one of the Cabiri of Samothrace.⁵

A Cabir represented with the attributes of this Lemnian Hephaestus would suggest a Dionysiac type,⁶ as is evident from the coins of Thessalonica, some of which,⁷ with the inscription KΑΒΕΙΡΟΣ, show on the obverse the head of a laureate youth r., with a hammer on his left shoulder, while others⁸ display on the reverse a youth similarly inscribed, standing l., clothed in a short chiton or *exomis*, with a rhyton in his right hand and a hammer or double-axe in his left (Fig. 3).

Although all the evidence from Thessalonica is of late origin, there are indications that the cult itself was ancient.⁹ At any rate, types of the sort represented on these Macedonian coins



FIGURE 3.—CABIR: COIN OF THESSALONICA.

¹ Schol. Apoll. Rh. I, 917; *Etym. Gud.* 289, 20; *Etym. Magn.* 482, 27.

² Cic., *De Nat. Deorum*, III, 58; Ampel. 9; Lydus, *de mens.* 4, 51 (ed. Wuensch).

³ Kern, *Arch. Anz.* 1893, p. 129.

⁴ Lobeck, *Aglaophamus*, pp. 1207 ff.

⁵ Herod. III, 37; Bloch, *l. c.* p. 2525; but cf. Kern, *Pauly-Wissowa*, s. v. 'Kabeiros und Kabeiroi,' pp. 1422, 1427.

⁶ For abundant references to prove the close connection between Hephaestus and Dionysus, see R. Pettazzoni, 'Le origini dei Kabiri nelle isole del Mar Tracio,' *Mem. R. Accad. dei Lincei, Classe di Scienze morali, storiche e filolog.*, Serie V, XII, 1909, pp. 717 f. This is not the place to discuss the reason for the resemblance between the Cabir, Dionysus, and Hephaestus. This resemblance I believe to be fundamental and due to the development of the three divinities from a common origin.

⁷ E. g. Mionnet, *Description de médailles antiques*, I, p. 491, no. 303; cf. Suppl. III, p. 119, no. 743.

⁸ *Brit. Mus. Cat. of Coins, Macedonia, Thessalonica*, p. 113, 47 (Imperial).

⁹ See below, p. 258, note 6 and Cook, *Zeus*, I, pp. 104 ff.

suggest a possible origin for the Dionysiac Lares, and I would add the further suggestion that many of the quiet standing figures, which in dress and attributes resemble the Lares but lack inscriptions to make the attribution certain, may in reality be Cabiri. The singleness of these figures, influenced, if my supposition be correct, by the type of the single Cabir, may have appealed to the Romans as a congenial reminiscence of the original *Lar familiaris*.

In discussing the possible effect of Dionysus-Cabir upon the Lares, we may remember, too, that in the tale of Attus Navius¹ the shrine of the Lares is in a vineyard and grapes are offered to them, and that Liber, who like Dionysus was called son of the Cabir, was himself sometimes numbered among the Cabiri.²

With the Cabiri or Corybantes of Macedonia was associated a piteous story which bears undoubted resemblance to the Orphic tale of Zagreus. Christian propagandists³ recited with horror the murder by two brothers of a third, identified with Dionysus by Clement, and the burial of the victim at the foot of Mount Olympus. In Clement's version, the head only received burial; the *membrum virile* was transported by the murderers to Etruria.⁴

With this story in mind, it is interesting to note the tripling of the Dioscuri-type which occurs frequently on Etruscan mirrors.⁵ Whether in such cases the three youths are in truth a reminiscence of similar Greek groups of the three Cabiri we may leave doubtful.⁶ That some knowledge of the Theban and Samothracian cult-legends was current in Etruria seems proved from the mirror (Gerhard, pl. CXXXVIII) where Prometheus sits on his rock between "Castur" and "Calinice" who hold in their hands the symbol of the Titan's punishment,⁷ the iron ring⁸

¹ Cic. *De Div.*, I, 31; Dion. Hal., III, 70.

² Lobeck, *Aglaophamus*, p. 1208.

³ Firm. Mat., *De Err. Prof. Rel.* 11; Clem. Alex., *Protr.* II, 19, 1-4, p. 15, 1 ff. (ed. Stählin).

⁴ For a connection between the Tarquins and the gods of Samothrace, see Macr. III, 4, 7.

⁵ E. g. Gerhard, *Etruskische Spiegel*, pl. LV.

⁶ The mirrors may indicate the ancient origin of the cult-legend told by Clement and the other propagandists in regard to the Cabir of Thessalonica.

⁷ Welcker, *Trilogie*, p. 51; Kern, *Arch. Anz.* p. 130; Serv. in *Virg. Ecl.* VI, 42; Pliny, *N. H.* XXXVII, 2.

⁸ Two rings according to Cook (*Zeus*, I, p. 328⁹); a ring and gem according to Terzaghi (Milani, *Stud. e mat.* III, p. 213).

which was one of the distinctions of the *mystae* of Samothrace.¹ At any rate, the common occurrence in Etruria of the so-called Cabiric mirrors would increase the probability that the Romans also were familiar with groups in which two youths resembling the Dioscuri surrounded a third, more prominent, figure.

On many mirrors,² furthermore, one of the "Dioscuri" appears with the inscription Laran. Etymological connection between Laran and Lares has been affirmed by Corssen.³ The possibility of an equation made by the Romans, justified or not justified by etymology, is strengthened by the comparison which Thulin has undertaken between Martianus Capella's account of the wedding of Mercury and Philology where the gods are divided among sixteen different regions of the heavens, and the names of divinities on the bronze liver of Piacenza.⁴

Martianus, I, 46 reads:—*In secunda itidem mansitabant praeter domum Iovis, quae ibi quoque sublimis est, ut est in omnibus praediatus, Quirinus Mars, Lars militaris; Iuno etiam ibi domicilium possidebat, Fons etiam, Lymphae diique Novensides.* The same conjunction of the Lares with Mars, Fons, and Iuno is noticeable in the *lustrum missum* of the Arval Brothers.⁵

In the corresponding position to the *Lar militaris* on the bronze liver appears the Etruscan *leθn* or *leθam*, a deity for whose association with Laran see *Etruskische Spiegel*, V, p. 12. The mirror referred to was seen by Corssen, who describes the figures upon it as almost destroyed. He was able to decipher the inscriptions *Uni, Menrva, Tinia, leθam, Laran, . . . arna*,—which prove the scene to have been the Birth of Menrva-Athena.

If one tries to explain the presence of *Leθam*=*Lar militaris* in a birth-scene, one is led to remember the frequent appearance on similar mirrors of the Dioscuri at the birth of Minerva. As the Dioscuri resembled in type the Lares, it seems likely that *Leθam*=*Dioscur*. But on the mirrors Laran also appears as

¹ Lucretius, VI, 1044; Pliny, *N. H.* XXXIII, 23. The story of Prometheus, as Kern remarks, is traceable to Lemnos where, it will be remembered, an inscription in a language seemingly akin to Etruscan has been discovered. Proof of the worship of the Cabiri among the Etruscans may also be derived from Dion. Hal. II, 22, 2.

² Gerhard, *Pls.* CCLV, c; LIX, 2; CCLVII, c, 1; XC; CCLXXXIV, 1 and 2; Vol. V, p. 12; pl. 84, 2.

³ *Sprache d. Etr.* I, p. 252.

⁴ C. Thulin, *Götter d. Martianus Capella*, pp. 42 ff.

⁵ See Pauly-Wissowa, s. v. *Arvales Fratres*, pp. 1481 f.

a Dioscuric type, and therefore Laran may equal *Lar militaris*.¹

The chthonic nature of the Cabiric cults, particularly on Lemnos and Samothrace, the legends involving the Cabiri and Hecate, goddess of the crossroads,² and the connection of Dionysus with the cult of the dead may have contributed to the assimilation of the Lares and the Magni Di.

Among the features of the Samothracian worship were solemn dances in stately measure.³ Such dances are appropriate to all deities of fertility, such as the Lares.⁴

If, as Wissowa considers, the legends of Ocrisia and similar tales, which give Vulcan as an alternative for the *Lar familiaris*, are of late origin and due to Greek influence, we may trace to the same influence the head and pincers of Vulcan above the Lares on the coins of the *gens Caesia*, not regarding these symbols with Fowler⁵ merely as a moneyer's mark, but as derived from the connection of the Cabiric type with Hephaestus.⁶

When the abuses of the *collegia compitalicia* led to the reforms of Augustus, the emperor's conservatism would induce him to change as little as possible the form in which the *Lares Compitales* already existed. To avoid confusion with the Penates, the Dionysiac type must be favored for the new Lares, rather than the Dioscuric type. But if Augustus were familiar with Etruscan representations of the Dioscuri or Cabiri grouped as *paredroi* on either side of a third more prominent brother, the possibilities which lay in imitating such a group would appeal to him.

The association of the story of the three Cabiri with the Zagreus-myth, the worship accorded the third brother,⁷ and the

¹ We recall too that the tales of the phallic Lar and Ocrisia were localized in the palace of the Etruscan king, Tarquinius Priscus.

² On Samothrace, the Cabiri purify Hecate from sin (Schol. Theoc., *Id.* II, 12). See Lobeck, *Aglaophamus*, p. 1215, and Immisch in Roscher's *Lexikon*, s. v. *Kureten*, p. 1620.

³ Stat., *Achill.* II, 157; Conze, *Reise auf den Inseln des thrakischen Meeres*, pl. 12; *Neue Untersuchungen*, pl. 9; Rubensohn, *Mysterienheiligtümer v. Eleus. u. Samothr.* p. 133.

⁴ Otto, *op. cit.*, p. 119.

⁵ *Roman Festivals*, p. 351.

⁶ On a bronze coin of Claudius Gothicus (Cohen, *Monn. imp.*² VI, 137, 65) the Cabir bears a hammer and tongs; cf. H. von Fritze, 'Birytiis u. die Kabiren auf Münzen', *Z. Num.* XXIV, 1904, p. 126, and *B.C.H.* XIX, 1895, p. 110, n. 2.

⁷ Firmicus, *l. c.*: *Hunc eundem Macedonum colit stulta persuasio. Hic est Cabirus, cui Thessalonicenses quondam cruento cruentis manibus supplicabant.*

fact that the Roman Lares were the heroized dead would all facilitate the apotheosis of the Genius which Augustus inserted between the gods of the crossroads, and lead by rapid yet imperceptible steps to the deification of the Emperor.

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FURTHER NOTE ON THE ERUPTION OF VESUVIUS
IN 79 A.D.

IN an article published in this JOURNAL in 1918 (Vol. XXII, No. 3), dealing with certain phaenomena exhibited by Vesuvius in the famous eruption of 79 A.D., I raised again the question whether the Italian volcano might not have belched out against Pompeii such a fiery blast as that from Mont Pelée which in 1902 destroyed the city of St. Pierre in Martinique. This suggestion I had first made long ago in my notes on the sixteenth and twentieth letters of Pliny's sixth book, published in 1903 in my edition of selections from that author's correspondence (London, Macmillan and Co.). The notes concerned were written soon after the great eruption of Pelée, and were actually in print, though not yet issued, before the observations of Professor Angelo Heilprin on the eruption appeared.

Recently this repeated suggestion of mine has been mentioned with some courteous demur in an article on 'The Past Decade of Pompeian Studies' in the *Classical Journal* for April, 1920 (Vol. XV, No. 7) by Mr. A. W. Van Buren, of the American Academy in Rome. His objections are such as might naturally occur to a scholar especially versed, as he is known to be, in Pompeian archaeology. The subject concerned is of so perennial and dramatic interest, both scientifically and historically, that I shall probably be pardoned for some comment on the objections, though I should like to disclaim any distinctly partisan attitude on what is possibly an insoluble problem. Yet progress toward a solution can only be made through discussion and the interchange of criticism.

In the first place Mr. Van Buren remarks that "if there was a hot blast it came not as one would have expected at the beginning but at an advanced stage of the eruption." It is quite true that, if it came at all, it came not at the beginning but at the time of the recrudescence of the eruption and at its most violent point. This increase of violence is plainly marked in Pliny's description, and occurred after a depth of *lapilli* to the measure of several

feet must have already fallen on the doomed city, and when thereby the lower portions of the walls of the buildings were protected and braced against any violent horizontal impact through the air. Most of the inhabitants had already fled beyond the gates. I do not know why Mr. Van Buren thinks "one would have expected" otherwise, unless he has not familiarized himself with the accounts of the Martinique eruption. That is the only instance of a catastrophe of this character thoroughly known to modern observers. On it alone can be founded any judgment about what one might expect in a similar case, unless we may also draw safe conclusions from the less familiar eruption of the Japanese volcano Bandaisan, in 1888, which seems to have been of like character. In the Martinique eruption the sequence of events corresponded in all essential aspects to that postulated by my hypothesis at Pompeii. Mont Pelée after an almost unbroken quiescence of unrecorded centuries had now been in lively eruption for some days; the phaenomena were increasing in violence; the surrounding country, including St. Pierre itself, had already been deluged with ashes; then came the terrific blast, followed twelve days later by yet another of similar intensity that completed the devastation. The like fiery tornado that destroyed Morne Rouge occurred after a still further interval of more than three months, during which time the mountain had never ceased to exhibit volcanic action of varying character and intensity. Certainly, then, there is no reason for the presumption that such a fiery blast at Pompeii must have come, if at all, at the beginning of the eruption of Vesuvius. The justified presumption lies quite in the contrary direction, and is not in the slightest degree repugnant to my suggestion, but on the other hand quite consonant with it. Of course this is not to say that such a hot blast could not issue at the initial stage of an explosive volcanic eruption. It is only to say that at Martinique it did not, and that in the nature of things there is no reason why it should mark the first outbreak, when, indeed, its violence might be chiefly expended in rending the rock-masses opposing its free exit. Both observation and theory are fatal to Mr. Van Buren's presumption.

My critic further objects (for it is apparently meant as an objection to the notion of a hot blast at Pompeii) that "its effects were very unevenly distributed." The sentences that immediately follow in his review appear to contain the specifications

that he has in mind under this general head. I could not have arrived at them from conjecture, for the effects of the blast would have appeared to me to be in all but one particular very evenly distributed, so far as we are now able to discern them. But Mr. Van Buren's specifications are, (1) that most of the inhabitants of Pompeii evidently had time to escape without the walls, and had actually thus escaped; (2) that those who were finally overwhelmed within the city "had lived, as a rule, through the shower of pumice-stones (*lapilli*) and into the rain of volcanic dust (*cineres*)"; (3) that the plastered walls discolored possibly by heat may have been thus affected by local conflagrations; and (4) that such substances as hemp, wood, and lead have been found in such condition as would not suggest that they have been subjected to the action of intense heat.

It is evident that of these four points, which are all indubitable as to fact, the first two are of force against my suggestion only on the presumption that the hot blast must have come, if at all, at the beginning of the eruption. On that presumption these two objections would, to be sure, be damning. The hot blast could not have had the other effects noted and yet have spared human life almost entirely. But I have pointed out that the underlying presumption about the time of the blast is itself unjustified. The objections founded upon it therefore fall to the ground.

With regard to the third of Mr. Van Buren's objections it may be remarked that the utmost extent to which the postulation, if otherwise reasonable, of a uniform local-conflagration cause could go in rebuttal would be to indicate that it is unnecessary to suppose a hot blast in order to account for the discoloration of yellow wall-pigments, the uneven distribution of which phenomenon could more simply and with greater satisfaction of the principle of logical uniformity be assigned to the agency of local conflagrations. It cannot be asserted that to postulate a hot blast as the cause of the discolorations is to propose a less simple and probable cause in place of one more simple and probable. Had it not been for the disaster at Martinique, it would, to be sure, have appeared most wildly improbable, and even impossible, that such a blast could have swept Pompeii: since the event of 1902 it should not appear at all improbable *per se*, but quite possible. Yet one's judgment of the degree of probability of the actual occurrence will of course depend on the conclusions to be drawn

from the entire range of observed phenomena, and on the consideration whether any other single hypothesis, or combination of hypotheses, will equally well or better explain all the facts of present observation or past record. Certainly not all of them have been satisfactorily explained by the varying methods hitherto favored.

It is not entirely satisfactory to suggest merely that the discolorations may have been due to local conflagrations. In order to be most effectively in point on the present issue it would be necessary to prove, (a) that in all the cases where the discoloration has been observed there were actually such local conflagrations; (b) that the discoloration could not equally as well have been caused by a hot blast; (c) that the local conflagrations could not have been themselves started by such a blast. I note with interest that Mr. Van Buren apparently does not hold the late Professor Mau's belief that the discoloration is due to some mysterious slow chemical action. It certainly is inexplicable on this theory to find the oxydization working in some houses and not in all. Of the apparently selective action in this particular of a postulated hot blast I shall speak further on.

Now it may be that in those houses with marked change of yellow-ochre wall-pigments to red there are also found other indubitable signs of local conflagrations that are not to be found elsewhere. But I do not know of satisfactory evidence to this effect. I could not get it from printed records of the excavations nor from my own observation. I would by no means assert that it does not exist, though Professor Mau apparently did not think it exists, for he accounted for the discolorations otherwise. But it will be noted that in order to be satisfactory the evidence must be independent of the present state of the walls themselves (the cause of which condition is the matter at issue), and it must be such as does not exist in the case of buildings with no such discolored walls, unless indeed there can be shown sufficient reason for the variation of appearance under similar conditions. Until such evidence is forthcoming it is no argument against belief in the possible occurrence of the suggested hot blast to point out that the observed discolorations might have been caused by local conflagrations, especially if it cannot be proved that these were not themselves caused by a hot blast.

The only strong objection to the theory of a superheated tornado as the cause of the discolorations might be that only in oc-

casional houses has such discoloration been noted in any extensive measure, while there might be no apparent reason why the postulated hot blast should not have reddened the yellow-ochre pigment in all houses thus decorated, if it did so in any. To this it is reasonable to say that the walls would be likely to show marked discoloration only in cases where the accumulated *lapilli* had left them still exposed, on account of some local circumstance now perhaps untraceable. I should, however, like to examine again the extant reddened walls with this point in mind. It would also be interesting to make the actual test whether pieces of Pompeian yellow walls, if exposed for an instant to extremely high temperature, or for a longer time to the heat of a bonfire in close proximity to them, would undergo the reddening change of color. But the specimens from Pompeian walls that I possess are too valuable to be used as the *corpus uile* of such experimentation. I may try it on blocks of plastering colored for the purpose with yellow-ochre pigment. It should be noted that such changes of yellow wall-coloring to red are definitely reported from St. Pierre, where, however, I cannot be certain that the change was due to the hot blast rather than to the resulting conflagrations. There may also have been at Pompeii mere freakishness in the action of a hot blast, as I have mentioned below. And I could, if necessary, surrender to the local-conflagration theory (which Mau held as a fact, but rejected as the cause of the color-changes) all the cases of discoloration, without finding it necessary to withdraw the suggestion of the hot blast to account for possibly the starting of the local conflagrations themselves, and certainly for many other—perhaps for all the other—observed phaenomena that are pertinent to the case.

On the fourth point—that of the occasional preservation of hemp, wood, lead, and like destructible or fusible substances—I may remark that it has been my strong impression that as a rule, if not invariably, where substances like these have survived in good condition, it has been either under the especial shelter of masonry, or at the lower level, where the deep stratum of already fallen *lapilli* would offer protection against the momentary effects of great heat. I still retain that impression. But even if it is wrong, the cases of the preservation of exposed substances of the sort mentioned must be relatively very few, so few that they might be reckoned among the unaccountable vagaries of the fiery tempest. Such freaks of partiality in conservation occurred .

in considerable numbers at St. Pierre, and attracted the attention of various observers. Some of the scorched bodies, for example, were found stripped of their clothing (possibly, to be sure, not by fire but by the mechanical force of the blast), while other bodies were terribly burned under their clothing, while the clothing itself was uninjured. Doubtless in many instances, if not in every instance, of such apparent freakishness in treatment it might have been possible at the time to determine a sufficient reason for the discrimination from the circumstances of relative exposure. The same investigation might well be possible at Pompeii, in so far as there were instances there of similar difference of effect upon readily destructible objects above the level of the *lapilli*. A general comment of Professor Heilprin is perhaps worth quoting: "A scorch-blast that clears all human life before it, and leaves in places untouched objects that are normally thought to be most destructible, has many things for its characteristics which science has still to learn" (*Mont Pelée and the Tragedy of Martinique*, p. 120).

These brief paragraphs must serve as answer to the observations of necessity so briefly put forth in Mr. Van Buren's review. To me they appear to be sufficient answer. And I note that my friendly opponent (if he is really an opponent, and not merely a naturally and properly hesitant comrade) said nothing about a number of other points in my former article that appeared to me of greater importance in their bearing on the main question. I must, by the way, object to his pure assumption that the total wrecking of the exposed portions of most structures that projected above the lower strata of ejecta (those of *lapilli*) was due to the earthquakes mentioned by Pliny. It may have been so. But, to judge from St. Pierre, a blast of the Martinique intensity would have done the business quite as effectively—indeed, I am inclined to think even more effectively. For the earthquake must have worked mainly through the ground. It could hardly, I should think, have been effectively propagated through the loose blanket of freshly deposited and uncompacted bits of light pumice (the *lapilli*). Yet the only parts of walls that were shattered into fragments were those that projected above the *lapilli*. The portions of walls below were practically uninjured. If the earthquake caused the wreck, could the light and loosely lying pumice so brace the parts of the walls against which it was piled as to defend them perfectly from the stress of a force working in

a horizontal back-and-forth movement (cf. Plin. *Ep.* VI, 16, 15) communicated chiefly through their solid foundations? Could this apparently slight support be responsible for such a marked difference between the fates of the lower and of the higher portions of the walls? On the other hand, the postulated blast would readily shear away uncovered portions too suddenly to permit the force to be communicated to the already buried parts.

I would also reëmphasize my remark on the small amount of wood preserved in the ruins—unexpectedly small in amount and curious in its charred aspect, if we are to believe that there was no superheated blast, and that there were only isolated and occasional conflagrations, none of them involving any considerable areas.

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A NEW DOCUMENT FOR THE CEPPO HOSPITAL MEDALLIONS

THE decorations of the portico of the Ceppo Hospital at Pistoia have long afforded a battle ground for art historians. They have been attributed to almost every member of the Robbia school. In the *Brickbuilder* for 1890, pp. 222-224, I maintained that the medallions and half medallions, and they alone, should on stylistic grounds be attributed to Giovanni della Robbia. Milanese had already stated that the archives of the hospital show that Giovanni della Robbia received payments between 1525 and 1529, with no record of the sum paid nor of the object for which payments were made. A careful examination of the archives of the Ceppo hospital and of the mother hospital, S. Maria Nuova, Florence, resulted in the discovery of various sums received by Giovanni, and one of the objects is described as "*uno tondo dalla rubie.*" These records were copied by my friend Mr. Rufus G. Mather, and published by him in *L'Arte*, XXI, 1918, p. 196, IV, and by myself in *A. J. A.*, XXII, 1918, pp. 361-377.

Mr. Mather has just discovered at S. Maria Nuova a new and important document, which definitely connects the name of Giovanni della Robbia with the medallions of the Ceppo hospital. These medallions (*rotundi*) are described as five full medallions of glazed terra-cotta ornamented with figures or coats of arms and four half medallions of the same material. Two of them were to be delivered during the month of March, 1525, and the rest by May, 1526. Giovanni was to be paid at the rate of four and a half golden florins for each medallion. The record shows that Giovanni continued to receive payments until 1529, the year of his death.

As the porch of the Ceppo hospital still displays five full medallions, (1) the Annunciation, which bears the date MDXXV, (2) the Visitation, (3) the Assumption, (4) the Ceppo coat of arms, (5) the arms of the Medici family, and four half medallions with arms of the Ceppo hospital or of the city of Pistoia, there can be

now no uncertainty as to the part played by Giovanni della Robbia in the decoration.

DOCUMENT: [Discovered and copied by Mr. Rufus G. Mather.]

"1525 Indict(ione) 14

.....

.....

.....

(In margine: Locatio sculpture)

Item postea dictis a(n)no Indict(ioni) loco et die x mensis martij p(rese)nt(i)-bus Paulo olim Nicci (Niccolai) d(e) bencis et Bartolo olim franc¹ Savellis civibus florent testibus etc

R(everen)dus in xpo(cristo) p(ate)r d(omi)n(u)s L^{dus} bonafidej hospitalarius et rector hospitalis S^{te} Marie Cippi d(e) Pistorio p(er) se et suos in d(i)c(t)o hospitali successor (i)s et o(mn)i met(iori) mo(do) etc locavit Johan(n) j olim Andree marci d(ella) robbia scultori d(e) florentia

1525 Indict 14¹

p(rese)nti et conducenti etc ad laborandum et intagliandum quinque rotu-(n)dos terre cocte i(n)vetriate integros cu(m) intagliatione figurarum et armorum eo mo(do) et forma et scultura et eadem magnitudine unius rotundj quē d(e)dit scultū ēt itagliatū dicto dno L^{dō} dicto no(m)i(n)e Item quatuor medios eiusdem sortis q(ui) omnes circulj ascendunt ad su(m)ma(m) novē rotundorum qui Johan(n)es conductor p(ro)misit et sole(m)ni stipulatione convenit dicto dnō L^{dō} dicto no(m)i(n)e p(rese)nti et stipulāti eidem dare et tradere duos ex dictis rotūdis Itagliatos et p(er)fectos p(er) tu(tum) p(rese)nte(m) mēsē martij reliquos v(er)o p(er) tutū mēsē maij p(ro)ximi futuri 1526 et p(ro) eius labore et scultura p(ro)misit dictus dns L^{dus} dicto no(mi)n)e dare et solvere eidem Johan(n)i p(rese)nti et stipulātj ut s(upra) flor aurj quatuor cū dimidio lar d(e)auro ī auro p(ro)q^lbet(quolibet) rotundo cum pacto inito inter dcās p(ar)tes q(uod) si dictus Johannes nō daret eidem dnō L^{dō} dictos rotūdos p(er)fectos dictis temporibus possit dictus L^{dus} ut s(upra) liceat locare alijs quibus voluerit et placuerit impensa dicti Johan(n)is que o(mn)ia etc p(ro)-misit etc attendere etc sub pena flor xxv auri larg d(e) auro ī auro que pena etc q^a(qua) pena etc p(ro) quibus etc obligavit etc renūtiavit etc cui etc p(ro) garantigia etc R(ogans) etc."

[Archivio del R. Arcispedale di S. M. Nuova. Rogiti di Ser Antonio di Michele di ser Migliore Migliorati, Protocolli 1524-1526, segnato F. II c. 100^e e 101.]

ALLAN MARQUAND.

PRINCETON UNIVERSITY.

¹ Heading of p. 101. The first word of the page is "p(rese)nti."

NOTES ON "LOST" VASES

IN *A.J.A.* XXI, 1917, pp. 409-416, I published a list of "lost" vases that I had succeeded in identifying in various museums and private collections. These were all vases published by Reinach in his "*Répertoire*." To that list I can now make the following additions and corrections.¹ The same abbreviations will be used as in the former article.

Mon. dell' Inst. XI, pl. 50. Now in the National Museum, Copenhagen.

Ann. dell' Inst. 1846, pl. M. Copenhagen, National Museum, 126.

1859, pls. G. H. Petrograd, Stephani 1641.

1878, pl. I, 1. Beazley² says that this vase is Louvre G206.

The Bourguignon vase³, therefore, must be a replica.

'Εφ. 'Αρχ., 1890, p. 11. Vivanet Collection, Cagliari, Sardinia.

Coghill, 22, 1. Ricketts-Shannon Collection, London.

22, 2. *Hope Sale Catalogue*, 85, 2. Now in Ashmolean Museum, Oxford.

31, 1. Now in collection of Mr. S. M. Franck.⁴

A. V. 84-85. British Museum ES.

Since the Hope Sale a number of the vases in that collection have turned up in various museums and private collections. Most of these have been duly noted by Hoppin and Beazley, in the works cited, wherever they were vases that could be attributed to any of the different painters of the red-figured technique discussed by them. As their books are large and expensive, and perhaps not always as accessible to all students of vases as Reinach, I shall run the risk of repeating material already made public by assembling the Tischbein vases, the location of which has now become known. References to the Hope Sale Catalogue will not be given, as they can be found in my previous paper.

¹ These references are derived, for the most part, from a study of the material in the books of Beazley (*Attic Red-Figured Vases in American Museums*), and Hoppin (*A Handbook of Red-Figured Vases*) which have recently appeared, after checking them up with Reinach's *Répertoire*.

² *l. c.* p. 138.

³ See *A.J.A.* XXI, 1917, p. 410, under this reference.

⁴ *Hope Sale Catalogue*, 56, 2.

- Tischbein*, I, pl. 7. In the Fitzwilliam Museum, Cambridge.
I, pl. 14. In the possession of Miss Winifred Lamb.
II, pl. 21. Cory Collection, London.
II, pls. 22-23. In Collection of Hon. Marshall Brooke.
II, pl. 44. In Rhode Island School of Design, Providence, R. I.
III, pl. 7. In collection of Hon. Marshall Brooke.
III, pl. 11. In collection of John Ford, Esq.
IV, pl. 9. In collection of Hon. Marshall Brooke.
IV, pl. 21. In Museum of Fine Arts, Boston, Mass.
IV, pl. 37. In Ashmolean Museum, Oxford.
IV, pl. 41. In collection of Hon. Marshall Brooke.
IV, pl. 44. Reverse of IV, pl. 37.
IV, pl. 59. In Fitzwilliam Museum, Cambridge.

In my previous article, by an error for which I am responsible, *Tischbein*, V, 110, is printed for "*Tischbein*, V, 111."

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EDITORIAL CHANGES

With the publication of the present number (Vol. XXIV, 1920, No. 3) Dr. JAMES M. PATON retires from the Editorial Board of the JOURNAL.

The new Editor-in-Chief will be Professor WILLIAM N. BATES, *220 St. Mark's Square, Philadelphia, Pa.*, to whom all articles and other communications for the Editors should be addressed.

The Department of Archaeological News, Discussions, and Bibliography will be conducted by Professor SIDNEY N. DEANE, *Smith College, Northampton, Mass.*

The business management remains in charge of the GENERAL SECRETARY, *Archaeological Institute of America, Columbia University, New York, N. Y.*

SUPPLEMENTARY NOTE TO *A.J.A.* XXIV, 1920, PP. 1-3

In my comments on prehistoric remains in the village of Old Corinth reference should have been made to finds reported by Dr. T. W. Heermance, *A.J.A.* VIII, 1904, pp. 440-441; and to the fact that Dr. A. L. Walker, who has undertaken the publication of the pottery from the main American excavations in Corinth, is in that connection making an exhaustive study of the prehistoric material, and adding to and controlling this by special excavations near the Temple of Apollo and west of the Agora. Some of the results of this investigation are known to me through Miss Walker's courtesy, but were of course not taken into account in my paper. The complete results promise to be of great importance and their publication will be awaited with much interest.

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1920

January-June

ARCHAEOLOGICAL NEWS¹

NOTES ON RECENT EXCAVATIONS AND DISCOVERIES; OTHER NEWS

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EGYPT

THE EXPEDITION OF THE METROPOLITAN MUSEUM.—In the *Fiftieth Annual Report* of the Metropolitan Museum of Art it is stated that the Expedition of the Museum in Egypt during the winter of 1919–1920 has been clearing the surface drift down to bed rock in the bays in the cliffs to the south of Deir el Bahri with the hope of finding important burials. For the Tytus memorial publications the scenes on the walls of the tombs of Nebamon and Ipuky, and Apuy at Thebes are being copied.

SYRIA AND PALESTINE

JERUSALEM.—Excavations in 1913–1914.—In *R. Arch.*, fifth series, X, 1920, p. 367, S. R. gives a brief summary of the first part of a detailed account by R. WEILL (*Revue des études juives* LXIX, 1919, Nos. 137–138) of his excavations, in 1913–1914, in the soil of the primitive city of Jerusalem in search of the tombs of the Kings of Judah. In this portion the Canaanite acropolis, the form of the Canaanite city, the ancient names of the valleys and springs, the extensions under Solomon, the eastern front of the city and its history, the royal tombs, the waters of Cedron and their rôle in the history of the southeastern front of the city, are all discussed. The fourth chapter sets forth the previous archaeological labors at this site, with their results, and closes with a general exposé of the archaeological situation in 1913.

¹ The departments of Archaeological News and Discussions and of Bibliography of Archaeological Books are conducted by Professor BATES, Editor-in-charge, assisted by Professor C. N. BROWN, Miss MARY H. BUCKINGHAM, Dr. T. A. BUENGER, Professor SIDNEY N. DEANE, Professor HAROLD N. FOWLER, Professor HAROLD R. HASTINGS, Professor ELMER T. MERRILL, Professor LEWIS B. PATON, Professor A. S. PEASE, Professor S. B. PLATNER, Professor JOHN C. ROLFE, Dr. JOHN SHAPLEY, Professor A. L. WHEELER, and the Editors, especially Professor MARQUAND.

No attempt is made to include in this number of the JOURNAL material published after June 30, 1920.

For an explanation of the abbreviations, see pp. 118–119.

ASIA MINOR

CHIOS.—Recent Excavations.—In *Ἀρχ. Δελτ.* I, 1916, pp. 64–93 (38 figs.); II, 1917, pp. 190–215 (40 figs.) K. KΟΥΡΟΥΝΙΑΤΗΣ publishes the results of his excavations in Chios since 1913. At Latomi thirty tombs were opened all but one of which had been plundered. At a place called Phana the remains of the temple of Apollo Phanaeus were discovered badly preserved. The building was of the Ionic order and probably dates from the sixth century B.C. There are also Byzantine remains on the site. A few inscriptions were discovered and many vase fragments including some Corinthian and some of the style of Naukratis. The most important metal object found was a silver statuette with traces of gilding, 6.5 cm. high, representing a warrior. It dates from the sixth century. The fore part of a horse of bronze, 11 cm. high, was also brought to light. In another part of the island part of a relief of a man on horseback was discovered.

GREECE

CARDITSA.—A Hoard of Silver Coins.—In 1914 there was found near Carditsa a jar containing 1647 silver coins, of which 1593 were secured by the National Museum at Athens. These are published in detail by I. N. SVORONOS in *Ἀρχ. Δελτ.* II, 1917, pp. 273–335 (8 pls.). They are mostly coins of Boeotia, e.g. 945 are from Thebes, but there is an interesting series of 221 from Aegina, and another of 188 from Sicyon. They date from the earliest period down to 315 B.C. One coin from Thebes, three from Tanagra, and one hundred from Aegina are supposed to be earlier than 550 B.C. Many of them are rare and unpublished.

CORONEA.—Inscriptions from the Temple of Heracles Charops.—In *Ἀρχ. Δελτ.* II, 1917, pp. 217–272 N. G. PAPPADAKIS publishes a long inscription found in the Byzantine church of Hagia Paraskeve, about an hour southeast of ancient Coronea. A similar, but shorter inscription from an unknown site has been in the museum at Thebes since 1902. Both have to do with the cult of Heracles Charops (Paus. IX, 34, 5). The position of the shrine has not yet been definitely determined.

CYTHERA.—Mycenaean Graves.—In *Ἀρχ. Δελτ.* I, 1916, pp. 191–194 (2 figs.) V. STAES describes his excavation of two caves on the island of Cythera. A woman's grave of late Mycenaean times and two men's bodies were discovered. There were a few vases, partly Cretan importations, a globular vase of steatite with designs engraved on it which must have come from Crete and is much older than the graves, and a low covered vase with a spout which is clearly Mycenaean, as the decoration shows, but in shape like Boeotian vases of the fifth century.

DAMANIA.—A Mycenaean Tomb.—In *Ἀρχ. Δελτ.* II, 1917, pp. 171–178 (2 figs.) S. A. XANTHOUIDES describes a tomb found in 1915 at the small town of Damania, Crete. It is rectangular in shape, with the sides gradually pushed in so that a single row of stones covers the top, and has a dromos about ten metres long in two sections. Three vases and three *larnakes* in it show that it dates from the third Late Minoan period.

ERETRIA.—The Temple of Isis.—In 'Αρχ. Δελτ. I, 1916, pp. 115–190 (28 figs.) N. PAPADAKIS describes his excavation of the temple of Isis and the buildings connected with it at Eretria. A few unimportant sculptures, many lamps and coins, and a few vases and inscriptions were brought to light.

GOURNES.—Early Minoan Tombs.—In 'Αρχ. Δελτ. I, 1916, pp. 59–63 (4 figs.) I. HATZIDAKIS records the excavation of several Early Minoan tombs containing clay and stone vases at Gournes, Crete. There were also found Late Minoan tombs containing *larnakes*.

LONGAS.—The Temple of Apollo Corynthus.—In 'Αρχ. Δελτ. II, 1917, pp. 65–118 (pl.; 58 figs.) P. VERSAKIS describes the remains of the temple of Apollo Corynthus (see Paus. IV, 34, 7) excavated by him south of Longas. There are two groups of buildings, one to the north consisting of two temples and one to the south where there were three. Of the first group one measured 11.32 m. by 7.52 m. It dates back, perhaps, to the fourth century B.C. and, at least in its latest form, was an Ionic temple *in antis*. In front of this was another smaller building running from north-west to southeast, dated by the Laconian or Cyrenaic vases found in it in the eighth century. Of the group to the south one was an archaic Doric temple of which a capital is preserved. It was hexastyle with twelve columns on the sides, and probably dates from the last quarter of the sixth century. There are also remains of two earlier temples apparently dating from the eighth century. Many small objects of bronze came to light during the excavations including fish-hooks, nails, handles, lance heads, etc.; also iron nails, and various objects of terracotta. Seven bronze statuettes were discovered, the finest of which (Fig. 1) represents a hoplite. It is well preserved except for the feet and left hand. Another earlier figure apparently represents Apollo and dates from the sixth century. Several short inscriptions were found including dedications to Apollo Corynthus in Temple A. The oldest temple was D, then next in date E and B. This Apollo was a warrior god not unlike the Amyclaeon Apollo.

MYCENAE.—Recent Excavations.—The British School at Athens has obtained permission to excavate further at Mycenae, and in the *Literary Sup-*



FIGURE 1.—BRONZE HOPLITE FROM TEMPLE OF APOLLO CORYNTHUS.

plement of the *London Times* for June 24, 1920, A. J. B. WACE gives a brief account of the results thus far reached. Study of the Royal Grave Circle has yielded evidence that Mycenae was inhabited at the end of the neolithic age, and was a flourishing city during the Middle Helladic period (2000-1580 B.C.). To the end of this period belong the earliest interments in the Grave Circle. The palace, which was much more extensive than the simple *megaron* type described in the books, and the latest burials belong to the Late Helladic period. Much later, after the fall of Cnossus, the city was fortified, the wall being carefully carried around the site of the graves; the enclosure was then filled, levelled, and surrounded by the double row of stone slabs. The excavation of a large building between the Lion Gate and the Grave Circle, begun by Schliemann, was resumed. It seems to have been a royal granary and was destroyed during the Dorian invasion. Here was found a series of vases falling between the Mycenaean and Geometric styles, which fill a gap in the history of Greek pottery. Examination of the "Treasury of Atreus" led to the discovery beneath the threshold of a small deposit of gold leaf, beads, and ivory, and also a fragment of a vase of typical late Mycenaean ware. The tombs may therefore be dated between 1400 and 1200 B.C., the traditional date of the dynasty of Atreus. *Ibid.* July 15, SIR ARTHUR EVANS criticises some of the conclusions reached by Mr. Wace. He argues that the shaft-graves and their contents do not belong to an indigenous Helladic dynasty, but to Minoan dynasts of the Middle Minoan and First Late Minoan periods. The stelae, which were originally covered with painted stucco, are contemporary with the graves and not due to a later systematization of the site. The "Treasury of Atreus" cannot be separated from the other great domed tombs of Orchomenus, Vaphio, and Kakovatos, all of which are dated by the pottery in Late Minoan Ib, or *ca.* 1500 B.C.

PHALERUM.—Recently Excavated Graves.—In *Ἀρχ. Δελτ.* II, 1917, pp. 13-64 (59 figs.) S. PELEKIDES describes eighty-seven graves opened by him at Phalerum. The vases found in them show that they date chiefly from the seventh century B.C. One large grave of later date contained the remains of eighteen men lying in two rows one above the other. They had iron rings about their necks and shackles on legs and arms. They were evidently executed, and the writer believes they were the men put to death on the information of Andocides for mutilating the Hermae.

THEBES.—The Results of the Excavations.—In *Ἀρχ. Δελτ.* III, 1917, pp. 1-503 (map; 212 figs.) A. D. KERAMOPOULLOS gives a detailed account of the excavations carried on at Thebes for a number of years, some of which have already been published. At the Gate of Electra two large circular towers were uncovered, and to the north remains of houses of different periods. Both within and without the gate the earth had been disturbed and objects of different date, some going back to pre-Mycenaean times, were found mixed together. In 1914 ten late Mycenaean graves were opened in this vicinity. The most important discovery was the site of the temple of Ismenian Apollo on a hill to the north of the church of St. Luke. The identity is made certain by two inscribed bronze vessels found in 1900. There were three temples on the site. The earliest dates from the geometric period. It was of sun-dried brick and wood and presumably without columns. It was destroyed by fire about 700 B.C. Remains of this building may be seen on the west slope of the hill. The

second temple was built of stone in the Doric style, also in geometric times. It lasted until the fourth century when it was pulled down and rebuilt in an enlarged form with a peripteros in such a way as to include the dedications in the old temple. This third temple was still in existence in the time of Pausanias. It was a hexastyle Doric building with twelve columns on the side. It was 46.25 m. long and 22.83 m. wide. Many of the details of its architecture are preserved. Mycenaean tombs were found in the vicinity, five lying under the



FIGURE 2.—WALL PAINTING FROM THE "HOUSE OF CADMUS": THEBES.

temple. Twenty-eight more were opened on the hill of Kolonaki south of the Cadmea. Two tombs go back to the period of Late Minoan II, and four others show a transition between this and the following period. Many later graves were also found. In the House of Cadmus, which was destroyed by fire, the excavations were not completed; but part of a fresco (Fig. 2) representing a standing woman holding three lilies in her right hand and a polychrome vase in her left was found. There was evidently here as in the palace at Tiryns (see *A.J.A.* XV, 1911, p. 424), a frieze depicting a procession of women. The writer also discusses in detail the topography of Thebes.

THERMON.—The Excavations of 1913-1915.—In *Ἀρχ. Δελτ.* I, 1916, pp. 225-279 (41 figs.); II, 1917, pp. 178-189 (11 figs.) K. A. ROMAIOS describes his excavations at Thermon (see *A.J.A.* XXIV, pp. 92 f.). North and east of the temple it was shown that an earlier temple existed with slightly different orientation. Still earlier than this there was a large building to the north. This, he thinks, was the palace of the king, as well as temple, from very early times, perhaps as early as 1500 B.C. After its destruction the archaic temple was built and lasted down to about 620 B.C. It, too, probably served as temple and palace during the geometric period. The later temple was destroyed at the end of the third century B.C. The elliptical buildings had roofs constructed of pieces of wood and twigs covered with clay, as bits of dried clay with marks of twigs on them show. They appear to date chiefly from Late Minoan III. The pottery may be divided into six classes, three of which contain the painted and three the unpainted vases. Three bronze statuettes appear to date from about 700 B.C. One wearing a conical helmet may represent Artemis. Many pieces of the gutter of the Lyseum still exist and more than fifty pieces of the terracotta metopes decorated with lions, dogs, female figures, and in one case a centaur, inscribed Φῆλο[s]. Two fragments of carved marble long known belonged to the trophy erected by the Aetolians to commemorate their victory over the Gauls.

ITALY

DISCOVERIES IN 1919.—In the *Literary Supplement* of the *London Times* for January 15 and 22, 1920, THOMAS ASHBY reports on archaeological research in Italian lands during 1919. There have been no sensational discoveries but much good work. In Rome the underground basilica near the Porta Maggiore has been much discussed but no sure conclusion as to its nature has been reached. The peculiar method of construction, by which the concrete walls, piers, and vaults were set before the nave and aisles were excavated, may have been adopted for purposes of concealment. At the church of S. Sebastiano on the Via Appia three pagan tombs have been found with notable paintings and stucco decorations. The restoration of Santa Sabina in the Aventine has also been completed. At Pompeii the new methods of excavation preserve much hitherto destroyed. The painted exteriors, balconies, and loggias must have given the town a more cheerful aspect than has been suspected. Some of the new paintings might almost have been executed in the seventeenth century. The municipal police station has been found at a street corner. It consists of a large room, separated from the street on one side only by a grille. In one house two floors with painted ceilings have been reconstructed, and in another the atrium has been roofed and a stairway rebuilt. In fact this house seems to lack nothing but the inhabitants. A large fulling establishment has a new type of atrium with a flat roof. At Ostia, a trading centre, many of the buildings are storehouses and the dwellings are built with much economy of space, conforming closely to the modern type of apartment house. Work has been carried on here by Austrian prisoners of war, and has served also as a public utility, since the sand removed has been used for dykes along the Tiber. The excavations are chiefly on the north of the main street, which is a continuation of the highway from Rome. The plan of the city was rectangular. A space over 500

yards long, from the baths to the "little market" has already been cleared and work is proceeding toward the gate and the river. At **Albano** the amphitheatre has been partly cleared, and work has been carried on at Santa Maria della Rotonda, which was a nymphaeum in the garden of Domitian's villa and only consecrated as a church in 1060. In the fourteenth century it was decorated with paintings of the Invention of the Cross. The second article, on Sicily and Sardinia, is based on the reports in *Mon. Ant.* Excavations around the temple of Athena in **Syracuse** have brought to light remains of the pre-Hellenic and early Greek periods. The temple is dated by Orsi about 474-460 B.C. Traces of an archaic temple, a large altar, and two small shrines were found, as well as a number of smaller objects and fragments, including a remarkable series of painted architectural terracottas. It has also been discovered that temple C, the oldest and largest temple at Selinus, had in the centre of one pediment a huge Gorgoneion of painted terracotta. In **Sardinia** the discoveries indicate early connexions with Crete and the Mycenaean civilization, as well as Sicily, Malta, and perhaps Egypt. Near **Sardara** a temple of the "nuraghi" period has been discovered with sufficient architectural remains to make possible an ideal reconstruction of its decoration. Beneath the temple was a vaulted chamber over a sacred spring. There was also some evidence for the worship of a bull-god. In another part of the island a group of rock-cut tombs was cleared. One contained an imitation of the poles supporting the thatched roof of a circular hut, and another a close parallel to the false timber roofs of Etruscan tombs. At **Cyrene** the so-called temple of Apollo has turned out to be dedicated to Hadrian. A circular building on the Agora was the meeting place of the priestesses of Hera. By an arrangement with the military authorities the most important part of the site has been reserved for archaeological purposes. In conclusion attention is called to the loss sustained by archaeology in the deaths of such scholars as Rivoira, Colini, Fornari, and Reina,—a loss which is the more serious in view of the wealth of material which still awaits publication.

ARICCIA.—Relief with Egyptian Scenes.—In *Not. Scav.* XVI, 1919, pp. 106-112 (fig.) R. PARIBENI reports the discovery, near the church of S. Maria della Stella and about 15 m. from the embankment of the Via Appia, of a fragment of a relief, 1.49 by 0.50 m., of Luna marble. It formed part of the cover of an inhumation tomb. The relief is in three zones. The upper one is supported at the right by a Telamon of Egyptian style, and there was undoubtedly another at the extreme left; it contains a shrine with a conical top, a figure of the bull Apis, and a colonnade with various figures. The middle zone, which is the largest, represents a lively dance; some of the figures have Hottentot characteristics. The third and narrowest zone contains a row of ibises; there are also a crab and a snake, which two of the ibises are about to devour. It seems probable that the relief originally belonged to a tomb on the Appian Way, and that the dance, in which there is an element of burlesque, is connected with some festival of Isis and Serapis. Paribeni would assign the relief to the time of Hadrian.

CAERE.—Recent Discoveries.—In *Not. Scav.* XVI, 1919, pp. 92-98 R. MENGARELLI publishes a number of fragmentary inscriptions from various places in Regio VII (Caere and vicinity); also (pp. 98-99) a marble head from the neighborhood of Caere, perhaps the portrait of a late emperor.

GIARRATANA (SICILY).—In *Not. Scav.* XVI, 1919, pp. 86-88 BIAGIO PACE reports discoveries in a late Roman necropolis in the district called Margi.

MARSALA.—Inscriptions from Lilybaeum.—In *Not. Scav.* XVI, 1919, pp. 80–86 BIAGIO PACE publishes a number of inscriptions, mainly amphora stamps of Punic type from ancient Lilybaeum, of which 15 are Greek and one Punic. Also two vase inscriptions. He further gives an account of finds in the neighboring necropolis.

OSTIA.—Inscriptions.—In *Not. Scav.* XVI, 1919, pp. 72–80 (2 figs.) G. CALZA reports numerous minor discoveries, including a number of inscriptions. Among the latter was one which mentions a consul of 228 A.D., probably Probus; one which contains another example of the rare adjective *Ias* (= *Ionica* or *ex Ionia*); a fragment of a *lex collegii*; and a metrical inscription in a fragmentary condition, which is said to be unique as being a commentary on some work of art, perhaps the Nereid group of which one figure was published *ibid.* 1893, p. 312.

Two Tombs.—Near the cemetery of S. Ercolano, on the road from modern Ostia to Castel Fusano, two small tombs of different epochs were discovered. The earlier one, which had been partly destroyed in ancient times by the builders of the second tomb, was of rectangular form with a vaulted covering. It fronted towards the north, apparently facing a road running east and west. The walls were of reticulate work covered with white stucco and decorated with branches, leaves and flowers. Nearby were found two terracotta masks of children with holes for suspension through the top of the forehead and through each ear; also several small objects, including a lamp of form 24, *C. I. L.* XV. (G. CALZA, *Not. Scav.* XVI, 1919, pp. 70–72; fig.)

ROME.—Fragment of an Arval Inscription.—In *Not. Scav.* XVI, 1919, pp. 100–106 R. PARIBENI publishes a new fragment of the *Acta Fratrum Arvalium*, apparently belonging to the year 140 A.D., recently acquired by the Museo Nazionale. It consists of the lower part of two columns, one of which lacks about one half of its width, while of the other only a small part is preserved. On the back in rough characters is an inscription of the ninth consulship of Diocletian and the eighth of Maximianus (304 A.D.). If this last inscription belongs to the *Acta*, as Paribeni thinks, it is the latest record of the existence of the Arval Brothers. It appears merely to designate a *magister* of the brotherhood.

An Ancient Hypogaeum.—On the right hand side of the Via Appia Antica, between the basilica of S. Sebastiano and the tomb of Caecilia Metella an ancient hypogaeum of the imperial period has been found with wall decorations and inscriptions. (G. MANCINI, *Not. Scav.* XVI, 1919, pp. 49–57.)

Miscellaneous Discoveries.—In *Not. Scav.* XVI, 1919, pp. 38–44 E. GATTI reports the discovery of several inscriptions, one of which, found near the corner of the Via Po and the Via Tevere, contains eleven lines and has "some literary pretensions." It contains an unusual number of apices, correctly placed. Mancini also reports a number of minor discoveries in various parts of the city.

Greek Inscriptions.—In *Not. Scav.* XVI, 1919, pp. 60–70 R. PARIBENI publishes a large number of Greek inscriptions from the Jewish cemetery of Monteverde, on the Via Portuense.

S. QUIRICO D'ORCIA.—Etruscan Antiquities.—In *Not. Scav.* XVI, 1919, pp. 89–92 A. MINTO records the discovery of a small Etruscan *sepulcrum* near S. Quirico d'Orcia (Siena), containing twelve urns with Etruscan inscriptions and a few bronze objects. A Roman coin fixes the date as the second half of the third century before our era.

SARDINIA.—Miscellaneous Discoveries.—In *Not. Scav.* XVI, 1919, pp. 120–187 (42 figs.) A. TARAMELLI describes a number of interesting discoveries and explorations in Sardinia, including several sacred springs and wells, dolmens and nuraghe, a few Latin inscriptions, including a fragmentary milestone and a stamp for inscribing new year's gifts with a wish for a *largus annus*, a votive tablet with Egyptian reliefs and an inscription, late Roman tombs with bronze and golden ornaments, a Punic altar with reliefs and an inscription, Byzantine decorative fragments, a proto-Sardinian temple, and a small hoard of late Roman coins.

TERRANOVA PAUSANIA (SARDINIA).—Two Portrait Heads.—In *Not. Scav.* XVI, 1919, pp. 113–120 (4 figs.) A. TARAMELLI describes two marble heads found within the limits of the ancient Roman town of Olbia. The first, in Greek marble, is undoubtedly a head of Trajan; it is intended to be inserted in the body of a statue by a wedge-shaped continuation of the neck. Including this, the head is 0.44 m. in height, well preserved, and representing the emperor in the latter part of his life. It evidently formed part of a public honorary statue, perhaps erected to commemorate the making of the port at Centumcellae. The other head is also provided with a wedge-shaped appendage and is of the same dimensions as the other. The features suggest a member of the Julio-Claudian family. Taramelli is inclined to regard it as a portrait of the younger Drusus, son of Tiberius.

VEII.—Excavations 1913–1919.—In *Not. Scav.* XVI, 1919, pp. 1–37 (7 pls.; 12 figs.) an account is given of the excavations conducted at Isola Farnese, the site of the ancient Veii, from 1913 to date. The work was begun under the charge of G. A. Colini, who died before it was completed. He was succeeded by G. Q. Giglioli, and during the latter's absence on war duty the excavations were directed by E. Stefani. The *Municipium Augustum Veiens*, which flourished during the latter part of the reign of Augustus and that of his successor Tiberius, was explored between 1811 and 1820, and inscriptions, statues, and coins were found. Between 1838 and 1843 further explorations were conducted on the site of the Roman city and the extensive necropolis was partly excavated, including the famous *tomba Campagna*. Lanciani's excavations in 1888–89 were more systematic, but many gaps were left and comparatively little was done on the site of the Etruscan city. The excavations begun in 1913 were designed to fill the gaps and make a systematic examination of the entire field.

In the necropolis, where the excavations were first carried on, some 1200 tombs were opened, of which the greater number had been rifled in ancient or in modern times. Nevertheless, over 6000 objects were found, including Italo-geometric and proto-Corinthian vases and fine *Bucchero* ware. The objects which were found belonged to three periods, dating from the tenth to the eighth centuries before our era, the eighth to the sixth, and the sixth and fifth. No Attic vases came to light.

One of the tombs, which has been preserved entire in the Museum of the Villa Giulia, shows the dead man buried under seven shields, which completely cover him, recalling the story of Tarpeia. The warrior wore a crested bronze helmet and had by his side a sword of iron ornamented with gold and amber, while at his feet were a horse's bit and the remains of a car. His robe was fastened with a fibula of gold. Another find was a beautiful bronze shield, recall-

ing those of the Salii. This part of the excavations is described by G. A. COLINI, and is followed by a notice of the writer's death, by F. BARNABEI.

In the city itself excavations in the southern part (the so-called piazza d'Armi) revealed primitive dwellings of the Italic period, while over these were houses of the so-called "orientalizing" epoch, with vases belonging to centuries

VIII-VI B.C. Painted tiles and a terracotta statuette indicated the existence of the temple which was located there in the plan of Canina. The most important discovery was in the locality known as Cannetaccio at the southern boundary of the city, where the hill on which Veii lay slopes down to the Fosso dei due fossi, a tributary of the Cremera. Here a number of fragments of tiles, antefixes, and votive offerings were found, which had fallen from above. A level place called Portonaccio is crossed by a Roman road, part of which was already known. This road was further explored and found to be in good condition, and near it a wall of large tufa blocks forming part of a temple came to light along with many terracotta fragments. A number of trial ditches were dug, one of which ran into several statues which were broken, but were standing in an upright position beside the road, where they had evidently been placed carefully at the time when the road was built across the sacred enclosure. The statues, which were decorated with colors, were taken to the Museum of the Villa Giulia.

The first of these statues (Fig. 3) was a male figure 1.75 m. in height from the top of its head to the plinth on which it stood. Since the body is inclined forward, the actual height of the statue is about 1.80 m. with corresponding proportions. It represents the god Apollo, advancing towards the right. Nine long black curls of hair hang upon his shoulders. He is clad in a short chiton,



FIGURE 3.—TERRACOTTA APOLLO:
VEII.

ending above the knees, and bordered on the neck and shoulders with a double line of purple, and below with a single line of the same color, about 1 cm. in width. Over the chiton is an himation, which falls from above the left shoulder and covers the back. It then passes under the right arm and over the right shoulder and falls vertically behind the back. This has a border a little wider

than that on the lower part of the chiton and of the same color. The legs and feet of the god are bare, and the arms, which are missing, were also bare. The appearance of the shoulder muscles indicates that the left arm was carried slightly back of the body and the right some little distance before it, as in walking. The hair is bound by a cord-like fillet, which passes from the forehead to the nape of the neck behind the ears. Within the space included by the fillet the hair is carefully combed; on the forehead were two rows of curls in relief, of which the greater number have been broken off. Those on the temples, which are longer than the others, are preserved. The god inclines forward, resting firmly upon the right foot; the left is carried back and raised a little, completing the step. The muscles are strained as in walking, and the drapery clings to the body, as if caught by the wind. The god looks forward and downward with an impassive expression. The statue is practically entire, except for the arms, and is remarkably well preserved, although it had been broken into two parts when it was laid away. The whole surface is painted, the nude parts being reddish-brown, the hair and eyebrows black, the eyes white with a reddish iris and black pupil. The robe is uncolored and has the clear yellow color characteristic of archaic terracotta. The head is somewhat small for the body, the face measuring 165 mm. from hair to chin and 130 across the cheeks. The statue rests upon a rectangular plinth $59 \times 38 \times 5$ cm., which is almost entire; the feet projected over the edges and are broken. On the plinth is a support which rises between the legs of the statue and has its upper part covered by the himation; it is decorated with palmettes and volutes. The appearance of the statue, which was made and baked in one piece, indicates that it was intended to be seen from the left side. Through the support and running the length of the plinth is a hole, 65 cm. in diameter, through which a pole could be passed for transporting the image. There are two oval openings into the interior of the figure, one under the support, about 12 cm. long, and one between the shoulders, 16×8 cm.

A second statue, of the same dimensions as the one just described, is preserved only in part. It represents the feet of a man, painted reddish-brown, and an animal apparently a hind. The latter appears to be alive and is bound in the characteristic fashion in which beasts were carried to market in ancient times. That is to say, the lower part of the front legs and of the hind legs are brought together and bound to each other with an osier or a thong. The plinth, which is small ($65 \times 37 \times 5$ cm.) as in the case of the Apollo, is surmounted by a large support, originally about 80 cm. high, and adorned with palmettes and volutes. On this support appears the paw of a lion, by which the male figure is identified as that of Heracles. There is a large hole under the support, as in the statue of Apollo, and smaller lateral openings in the body of the hind and in the support. The coloring is similar to that of the Apollo, the nude parts being reddish-brown, the hind and the lion skin the natural color of the terracotta, the hoofs of the animal and the bonds by which the legs are tied, black. The palmettes are red and dark blue, as in the archaic antefixes.

A beardless male head, with the neck and a part of one shoulder, found a short distance away from the statue of Heracles, is identified by its winged cap as that of Hermes. Its dimensions correspond with those of the Apollo (the face is 16×12 cm.), and it evidently belonged to a statue of the same size. Nine large ringlets of hair fell upon the shoulders, of which only five are preserved,

while in front, as in the Apollo, there are two rows of curls, of which those over the temples are larger than the rest. The colors are similar to those of the Apollo. Enough of the left shoulder is preserved to show a bordered chiton, similar to that of the Apollo. The helmet-shaped cap is red except for the part turned back, which is yellow with traces of decoration. The wings on the cap are adorned with scales. In the top of the cap are two small holes and there is a similar one on the left shoulder. These seem to have been intended to hold metal objects, probably *μηνίσκοι*. Except for the end of the nose the face is perfectly preserved. There are indications of an oval opening in the back of the figure, like that of the Apollo. There was also found what is thought to be a part of the same statue. It represents a male figure from the belly to the knees, with the bare legs painted reddish-brown. Parts of the chiton and of the himation are preserved and have a purple border. There are remains of a support, on which the palmette is painted, not sculptured, as in the other statues. There was also found a small portion of the drapery of a fourth figure of the same dimensions as the other three.

It seems certain that the first two statues formed a group, of which the subject was a contest between Apollo and Heracles about a hind. Such a contest is represented on several monuments collected by Overbeck in his *Kunstmythologie* (Apollo) III, pp. 415 ff. and reproduced in *Not. Scav.* In one illustration the animal's legs are tied exactly as in the statue of Heracles. On the basis of these representations the group is reconstructed in the following order: Hermes—Heracles and the hind—Apollo—a fourth figure, perhaps Artemis. Owing to the similar size of the figures they could not have belonged to a pediment group and they are too tall for acroteria. Hence it is assumed that they formed a votive group not directly connected with the temple, but deposited in the sacred precinct as an *ex voto*. The work is ascribed to the school of Vulca of the sixth and fifth centuries B.C.

SPAIN

NEW INSCRIPTIONS.—In *Mél. Arch. Hist.* XXXVII, 1918-1919, pp. 309-331 EUGÈNE ALBERTINI publishes some new inscriptions, and emendations and additional epigraphic information in the case of others already published, derived first from certain manuscript sources in Spain, *i. e.* the original of the second volume of Pérez Bayer's diary of 1782 which had been lost, notes made in the eighteenth century by Velázquez, marquis of Valdeflores, and some manuscripts in the library of the Historical Academy at Madrid; and secondly from monuments which he himself examined in 1909-1912.

BOLONIA.—Excavations in 1919.—In *C. R. Acad. Insc.* 1919, pp. 234-236 P. PARIS reports upon the excavations at Bolonia in 1919 (see *A.J.A.* XXIII, 1919, pp. 84 and 818). The necropolis still yields fine pieces of pottery and glass, and furnishes much information about burial rites both before and after the Roman conquest. The part now being explored dates from the third century. In the village were found three sanctuaries overlooking a large public square. They had a rectangular cella with engaged channeled pilasters along the side walls and statues at the rear. In front was a vestibule with columns. Each temple stood on a high podium and was approached by steps. They were built of a local stone and completely covered with stucco inside and out.

Enough has been found to permit a reconstruction. In front of the middle temple were two large altars. No inscriptions were discovered, but fragments of a statue of Ceres in the temple at the right indicate that that building was dedicated to her.

FRANCE

ENSÉRUNE.—Recent Excavations.—In *C. R. Acad. Insc.* 1919, pp. 293–294 F. MOURET reports upon the latest excavations at Ensérune, near Béziers (Hérault). Vases of four types have been found: (1) Imported Greek craters dating from the fourth century B.C. (2) Italiot vases, chiefly Campanian, consisting of craters and scyphoi, decorated with leaf patterns, also plates with stamped ornamentation. (3) Iberian vases probably imported from Spain, with linear and pseudo-Mycenaean decoration, primitive in appearance, but dating from the fourth and third centuries B.C. (4) Black or gray vases without decoration, or with geometric designs in white. These are of local manufacture, but there are among them some examples of bucchero ware imported from Etruria. There has also been found a terracotta figurine of a seated goddess with her left hand hanging idly and her right on her right knee. This was clearly made from an imported Greek mold and is good evidence for the penetration of Greek art into pre-Roman Gaul.

MARSEILLES.—The Syrian Congress.—In *C. R. Acad. Insc.* 1919, pp. 225–228 E. BABELON makes a brief report on the archaeological and historical sections of the French Syrian congress held at Marseilles in 1919, giving a list of the papers.

GERMANY

MISCELLANEOUS DISCOVERIES IN THE RHINE PROVINCE.—The museums and archaeological societies in the Rhine province report their activities and acquisitions during the years 1914–1918 in the "Beilage" to *Bonn. Jb.* 125, 1919, pp. 1–168 (12 pls.). Worthy of remark are the following: the discovery of neolithic and La Tène settlements near **Sarmsheim**; palaeolithic, neolithic and La Tène settlements near **Kreuznach**; a neolithic settlement near **Kottenheim**; Hallstatt graves near **Allenz**; a new camp of uncertain date near **Remagen**, and the continuation of the excavations in the Roman camp at that place; excavations in Roman and Frankish structures connected with the church of St. Maximinus at **Trier**, and minor excavations in the imperial thermae and amphitheatre; exploration of Roman potteries near **Speicher**.

COBLENZ.—A Precinct of the Matronae Vacallinehae.—A precinct dedicated to local divinities known as *Matronae Vacallinehae*, recently excavated in the neighborhood of Pesch near Coblenz, is described by HANS LEHNER in *Bonn. Jb.* 125, 1919, pp. 74–162 (27 pls.). Three successive groups of buildings occupied the same location. The first, built about 50 A.D., comprises an enclosure for votive offerings, two small square temples, a *horreum* and a cistern. The second, dating from 200 A.D., consists of a larger square temple and a small hexagonal monopteros probably dedicated to Jupiter. The third dates from about 330 A.D. The following buildings belong to it: a rectangular cella sur-

rounded by a porch, a new enclosure for votive offerings, a basilica with an apse perhaps devoted to Magna Mater, two rectangular buildings and a long stoa running the length of the precinct. The sanctuary seems to have been violently destroyed, perhaps at the beginning of the fifth century. The usual inscriptions, fragments of sculpture, architectural details, coins, potsherds, etc., were found in the course of the excavation.

COLOGNE.—A Colossal Head of Agrippa.—A colossal marble head found in Cologne has been identified as a portrait of Agrippa. The statue to which it belonged probably stood near the place where the head was discovered on a concrete foundation which has been known for a long time. It may have been erected shortly after the death of Agrippa, 12 B.C. (H. J. LUECKGER, *Bonn. Jb.* 125, 1919, pp. 178-182; pl.).

GREAT BRITAIN AND IRELAND

DUBLIN.—Acquisitions of the Royal Irish Academy.—In *Proc. Soc. Ant.* XXX, 1918, pp. 237-239 (fig.) E. C. R. ARMSTRONG notes that in 1918, the Royal Irish Academy acquired a gold fibula with cup-shaped ends, a gold bracelet, two bronze rings, and 124 amber beads. They were all found together some years ago near Banagher, King's County. They apparently date from the latest period of the Irish Bronze Age, about the fifth century B.C.

HOWLETTS.—A Newly Discovered Cemetery.—In *Proc. Soc. Ant.* XXX, 1918, pp. 102-113 (3 pls.; 2 figs.) R. A. SMITH describes the prehistoric and Anglo-Saxon remains from a recently discovered cemetery at Howletts, near Bridge, Kent. Many Jutish graves containing arms and jewelry and dating from the sixth century were excavated. Silver and bronze brooches and beads of amber and glass were found in the women's graves. Palaeolithic implements were also discovered on the site.

ISLIP.—Anglo-Saxon Antiquities.—In *Proc. Soc. Ant.* XXX, 1918, pp. 113-118 (pl.; 5 figs.) R. A. SMITH reports the discovery of Anglo-Saxon antiquities at Islip, Northants. They consist of fragments of cinerary urns, bronze brooches, glass beads, pieces of glass vessels, etc. Two well-preserved Roman urns were also found. Most of the antiquities are Anglian of the sixth century.

NORTHERN AFRICA

UNPUBLISHED PUNIC INSCRIPTIONS.—In *C. R. Acad. Insc.* 1919, pp. 208-216 J.-B. CHABOT reports upon his mission to Northern Africa to find unpublished epigraphic material for the *Corpus Inscriptionum Semiticarum*. In all 260 squeezes were made, 200 of inscriptions important for the *Corpus*, and 170 hitherto unpublished. A few unpublished Libyan inscriptions were copied.

KSIBA.—A Christian Epitaph.—In *C. R. Acad. Insc.*, 1919, pp. 248-251 P. MONCEAUX publishes a Christian epitaph found at Ksiba, the ancient Civitas Popthensis, in Algeria in 1917. It dates from the end of the fourth century and has several unusual features. It reads *Rogatianus, ab ortu vitae in functionis diem probatissimus Deo venerandi minister altaris, vixit in Ec(c)lesia annis LXXVIII. In pace accersitus IV Kal(endas) iun(ias).*

UNITED STATES

NEW YORK.—Recent Acquisitions of the Metropolitan Museum.—In *B. Metr. Mus.* XV, 1920, pp. 107–109 Miss G. M. A. R(ichter) notes the recent acquisitions of the classical section of the Metropolitan Museum. They include the following: *Marbles*. A fragmentary statue of an old fisherman, a replica of the fisherman in the Palazzo dei Conservatori in Rome; the head of a youth dating from about 480 B.C.; a statuette of a boxer of the fourth century; one of Aphrodite bending over to loosen her sandal, a Roman copy of a fourth century original; and three Roman portrait heads. *Bronzes*. A statuette of a warrior dating from the sixth century; one of a bull, of the fifth century; one of an athlete of the fourth century; and two of Hellenistic date representing a negro boy, and a bust of Zeus with the aegis; three Corinthian helmets; a Roman statuette, perhaps a copy of the Hermes Propylaeus of Alcamenes; and a handle in the form of a youth bending backward. *Vases*. A geometric stand; three Rhodian vases of the seventh century; a small Corinthian cup; three black-figured vases, an amphora with a marriage procession, a cylix decorated with maenads and satyrs, and a scyphos with the figure of Nereus riding a hippocamp; three important red-figured vases, a hydria decorated with a domestic scene (published by Tischbein), a hydria with a figure of Eros putting on a lady's sandals, and a lecythus on which a woman is depicted giving a warrior a drink. There were also acquired a gold fibula of the seventh century; two gold earrings; a set of two cups, a jug, a ladle, and seven spoons, all of silver, from Boscoreale; and fourteen Arretine moulds.

PHILADELPHIA.—Greek Vases.—In *Mus. J.* XI, 1920, pp. 56–67 (9 figs.) S. B. L(uce) publishes seven much injured Greek vases recently put together in the Museum of the University of Pennsylvania from fragments from Orvieto. They are: 1. an Attic black-figured amphora having on one side Heracles and the Erymanthian boar, and on the other a four-horse chariot seen from in front; 2. a black-figured hydria decorated with a chariot scene of which little remains; 3. an Attic black-figured column crater which originally had a scene of combat on one side, and a lion attacking a bull on the other; 4. a Chalcidian oenochoe decorated with a band of warriors; 5. a drinking cup without handles painted black but with a medallion in the centre in which is a bird in black; 6. a red-figured cylix of late severe style with scenes representing women at their toilet, assigned by the writer to the "Penthesilea master"; 7. a south Italian stamnos with maenads and centaurs.

EARLY CHRISTIAN, BYZANTINE, MEDIAEVAL, AND
RENAISSANCE ART

ITALY

BOLOGNA.—Two Reliefs in San Petronio.—In *Boll. Arte*, XIII, 1919, pp. 133–138 (6 figs.), G. ZUCCHINI publishes two works of art of the fourteenth century in the Bolognini chapel of San Petronio, Bologna, which he is able to ascribe to definite authors. The first is the relief work on the transenna, which may be given to Antonio di Vincenzo, architect of the church, on the ground of its close similarity to the window reliefs which are shown by documents to be expressions of his designs. The work was done in the last years of the four-

teenth century and shows an individual use of the Gothic, the forms of which are given serenity and composure. The second piece is a fragment of carved woodwork decoration for stalls. It came, it seems, from Santa Maria del Carrobbio and is the work of a Modenese master, Giovanni da Baiso, in the third quarter of the fourteenth century.

Quattrocento Miniature Painters.—In *L'Arte*, XXII, 1919, pp. 121-123, L. FRATI gives some data on the miniaturists, Taddeo Crivelli, Tommaso di Cesare, Basso da Modena, Gabriele de' Cipelli, Bartolomeo Tintore, Domenico Pagliarolo, Giovanni di Biagio, Nicolò di Marescotto, and Antonio degli Arienti.

FAENZA.—**Unusual Ceramics.**—In *Faenza*, VII, 1919, pp. 1-4 (11 figs.), G. BALLARDINI describes some fragments of pitchers in the ceramic museum at Faenza that seem to have been used for clearing and for cooling water. Their provenance is Cairo, and their chief interest lies in the intaglio or pierced decorations in the form of geometrical designs, Arabic letters, and conventionalized animals.

FERRARA.—**A Ceramic Triptych.**—In *Faenza*, VII, 1919, pp. 30-32, L. F. TIBERTELLI DE PISIS describes an unusual piece of work in ceramics, a Ferrarese triptych of the sixteenth century belonging to Francesco Bertoni of Ferrara. The Madonna and two saints are the subjects, but the chief interest lies in the inscriptions, which date the work in 1589 and give the names of the hitherto unknown artist and donor.

FLORENCE.—**Leonardo's Leda.**—In *L'Arte*, XXIII, 1920, pp. 70-84 (4 figs.), P. D'ANCONA gives a résumé of the data thus far collected in connection with Leonardo's painting of a Leda, and publishes a new copy, a Leda in the collection of G. D'Ancona in Florence. In its small size and minute technique this picture resembles miniature work, and it is to be assigned to the middle of the sixteenth century, the work of a Flemish master of no little talent, who visited Italy and borrowed from her style. The new example only confirms the arrangement of the central group that other copies have already indicated as the one used by Leonardo; it does not contribute toward a reconstruction of Leonardo's landscape setting.

MORANO CALABRO.—**Bartolomeo Vivarini.**—A little known altarpiece by Bartolomeo Vivarini in the convent of S. Bernardino in Morano Calabro, signed, and dated 1477, is published by G. NOCCA in *Rass. d'Arte*, XIX, 1919, pp. 155-156 (fig.). The large piece is divided into twelve compartments, besides the predella, and has for its central subject the Virgin and Child. It offers many parallels with other works by the artist.

PERUGIA.—**French Ivories.**—Important mediaeval French ivories in the national gallery at Perugia are published by U. GNOLI in *Boll. Arte*, XIII, 1919, pp. 109-112 (9 figs.). The most interesting of these is a large statuette of the Virgin and Child of the thirteenth century. It finds its closest analogies in the *Vierge dorée* of Amiens and the thirteenth century angels in wood of the Martin Le Roy collection.

ROME.—**A Sepulchral Gallery.**—In the Via Giovanni Paisiello near the Viale Gioacchino Rossini, 6 m. below the level of the street, a sepulchral gallery was found, the walls of which are colored white and decorated roughly in red with scenes representing Jonah and the gourd, the resurrection of Lazarus, Moses striking the rock, the Paralytic, and traces of other scenes. It belongs to the cemetery of S. Pamfilo. (E. GATTI, *Noi. Scav.* XVI, 1919, pp. 44-45).

Correggio.—In *L'Arte*, XXII, 1919, pp. 230–231 (fig.), A. VENTURI publishes a painting which, in spite of its poor state of preservation, may be assigned to the early activity of Correggio. It is in the collection of Franco Moroli, Rome, and was probably painted for Modena. The subject is the Madonna, S. Gemignano, and angels.

TURIN.—**Tintoretto's Trinity.**—In *L'Arte*, XXII, 1919, pp. 223–225 (fig.), M. PITTALUGA concludes from a study of the Trinity by Tintoretto in the picture gallery of Turin that it is the picture which was painted about 1570 for the church of S. Gerolamo, Venice, and that it has been reduced in size,—whether by fire or other accident is not known,—which accounts for the lack of the figures of three saints that formed part of the original composition.

VOLTERRA.—**Frescoes in the Palazzo dei Priori.**—Documentary proof for the hitherto uncertain attribution to Jacopo Orcagna and Niccolò di Pietro of the frescoes in the council chamber of the Palazzo dei Priori is given by M. BATTISTINI in *L'Arte*, XXII, 1919, pp. 228–229. The work was done in 1383.

A Painting in San Michele.—In *L'Arte*, XXIII, 1920, pp. 24–26, M. BATTISTINI contributes toward the solution of the authorship of the painting called "La Madonna del collo lungo" in the church of S. Michele, Volterra. The work is plainly that of a Florentine, and, though there is no satisfactory comparative material by Stefano di Antonio di Vanni da Firenze, documentary notice that he was working for the church of S. Michele at the time of this painting seems sufficient to indicate him as its author.



FIGURE 4.—PORTRAIT OF MARTINEZ MONTAÑÉS: PAINTING AND DRAWING BY VELASQUEZ.

SPAIN

MADRID.—**A Drawing by Velasquez.**—In *B. Soc. Esp.* XXVII, 1919, pp. 225–237 (2 pls.) the Marqués de CASA TORRES publishes a study of Velasquez's portrait of the sculptor Martinez Montañés in the Prado in connection with a somewhat mutilated drawing in the writer's collection (Fig. 4), which leads to

the conjectures that the Prado portrait presents today quite a different composition from that which Velasquez originally gave it, that Velasquez changed it a great deal some time after his first painting, and that its original arrangement was close to that of the drawing referred to. Hence, the drawing is thought to be a study by Velasquez for the portrait.

Two Spanish Paintings.—In *B. Soc. Esp.* XXVIII, 1920, pp. 24–31 (2 pls.) E. TORMO publishes two seventeenth century paintings of the Annunciation. One, representing simply the Virgin and the Annunciating Angel, is signed by Juan Carreño and dated 1653; it shows strong influence of Rubens. The other, a large Italianized work with many figures, is neither signed nor dated but is shown by documents to be the work of Claudio Coello in the year 1663. Both paintings are in Madrid; the first in the hospital of V. O. T. de S. Francisco; the second in S. Plácido.

OCAÑA.—San Pedro.—In *B. Soc. Esp.* XXVIII, 1920, pp. 32–38, the Conde de CEDILLO gives the history of the church of San Pedro, Ocaña. Besides its interest as an example of fifteenth century architecture, the church is a veritable museum of funerary sculpture of the fifteenth and early sixteenth centuries.

FRANCE

MARSEILLES.—An Unknown Masterpiece by Rembrandt.—In *Burl. Mag.* XXXVI, 1920, p. 208 (pl.) A. BREDIUS publishes what he considers Rembrandt's original portrait of a Man Reading a Book, copies of which are in the collections of the late Mr. Johnson at Philadelphia, Sir Frederick Cook at Richmond, the Comte de Bésenval, and the Comte de Demandolx Dedons at Marseilles. The last is the owner of the original, here published. It is signed, and dated 1643.

PARIS.—The Kiss of Judas on a Byzantine Gem.—In *B. Soc. Ant. Fr.* 1918, pp. 189–194 (fig.) E. BABELON publishes a Byzantine gem recently acquired by the Cabinet des Medailles upon which is engraved the Kiss of Judas. Christ stands in the centre, and in front of Him Judas about to kiss Him. Behind Christ is a small kneeling figure kissing His garment. On both sides are soldiers, thirteen in all, and above the inscription ΗΙΙΑΡΑ , *i. e.* $\eta\text{'}\pi\alpha\rho\acute{\alpha}\delta\omicron\upsilon\varsigma$. The gem is an ovoid 15 by 12 mm. It is remarkable for the large number of figures in the composition, but the execution is mediocre. It is probably to be dated in the ninth century. The absence of priests, the presence of the kneeling figure, and the lances of the soldiers are unique features.

A Medallion by Germain Pilon.—In *Gaz. B.-A.* I, 1920, pp. 166–172 (pl.; 5 figs.), J. BABELON publishes one of the finest of sixteenth century medallions, recently presented to the Bibliothèque Nationale. The subject is the chancellor René de Birague at the age of seventy, that is, in 1576, and the artist is Germain Pilon. Other portraits of the chancellor are discussed.

Bust by Mino da Fiesole.—Among the war-time additions to the Louvre described by P. JAMOT in *Burl. Mag.* XXXVI, 1920, pp. 287–293 (2 pls.), is the signed and dated bronze bust of Diotisalvi Neroni by Mino da Fiesole, 1464, in which the sculptor has risen far above his usual facility, approaching the power of Donatello. The bust was formerly the principal piece in the Gustave Dreyfus collection.

A Portrait by El Greco.—In *L'Arte*, XXIII, 1920, pp. 76–77 (fig.), L. VENTURI publishes a hitherto unnoticed head of an old man by El Greco, which

recently came into the collection of the Baron Michele Lazzaroni. The work belongs to El Greco's second Italian period, 1571-76.

Rembrandt Drawings.—An album of ninety drawings by Rembrandt, presented by M. Léon Bonnat to the Louvre, forms the basis of L. DEMONTS' study in *Gaz. B.-A.* I, 1920, pp. 1-20 (pl.; 16 figs.) of the authenticity and chronological order of a number of drawings.

Stained Glass.—In his account of the recent exhibition in the Petit-Palais of glass and paintings from Paris churches, P. BIVER (*Gaz. B.-A.* I, 1920, pp. 21-42; 9 figs.) calls attention to some representative works of Parisian stained glass ateliers of the middle of the fifteenth century and later, and to some paintings of the seventeenth and eighteenth centuries.

HOLLAND

HAARLEM.—Some Italian Wooden Sculpture.—A collection of thirteenth and fourteenth century Italian sculpture in wood in the Van Stolk Museum is published by R. VAN MARLE in *Rass. d'Arte*, XIX, 1919, pp. 203-209 (11 figs.). The finest pieces are four life-size figures which together form a Descent from the Cross. The mixture in these of Byzantine tradition with awakening Italian life and feeling suggests that their sculptor was a contemporary and compatriot of Cimabue.

GERMANY

MUNICH.—A Drawing by Dürer.—A hitherto unnoticed authentic drawing by Dürer, bearing his monogram, is published by E. SCHILLING in *Jb. Preuss. Kunsts.* XLI, 1920, pp. 25-31 (pl.; 2 figs.). The drawing is in the print collection at Munich and represents the Deposition from the Cross. It is similar in composition to the painting of this subject in the Germanic Museum, Nürnberg.

GREAT BRITAIN

LONDON.—A Fourteenth Century Stained Glass Panel.—In *Burl. Mag.* XXXVI, 1920, pp. 104-110 (pl.) B. RACKHAM publishes a stained glass panel presented by Mr. J. P. Morgan, Jr., to the Victoria and Albert Museum. It is found to belong to the same series as ten panels now in the Bavarian National Museum at Munich and to have come from the Abbey of Seligenthal, near Landshut. The subject is Agnes of Silesia, duchess of Bavaria.

Cornelius de Baellieur.—A painting of the Interior of a Picture Gallery by Cornelius de Baellieur lately acquired by Bromhead and Cutts and published by F. M. KELLY in *Burl. Mag.* XXXVI, 1920, pp. 293-299 (pl.), reopens the question of the authorship of a canvas in the National Gallery with a similar subject which has been attributed to Hans Jordaens (*Ibid.* XIV, 1909, pp. 236-239).

El Greco.—A painting of El Greco's last period (1604-1614), the Agony in the Garden, which has recently been acquired by the National Gallery, is published by W. G. CONSTABLE in *Burl. Mag.* XXXVI, 1920, pp. 142-145 (pl.). The painting was originally in the Convent of the Salesas Nuevas of Madrid and is one of several versions of the same subject.

An English Alabaster Altarpiece.—In *Burl. Mag.* XXXVI, 1920, pp. 53–65 (2 pls.; fig.) E. MACLAGAN publishes a late fifteenth century English alabaster altarpiece recently acquired by the Victoria and Albert Museum, one of the few complete examples extant. A list of other examples of these sculptured “tables” is also given. They are chiefly the work of sculptors of Nottingham in the neighborhood of the Chellaston and Tutbury quarries, in the fifteenth century.

UNITED STATES

BOSTON.—**Portrait by Corneille de Lyon.**—A portrait of Françoise de Longwy by Corneille de Lyon, recently acquired by the Museum of Fine Arts, is published by C. H. H. in *B. Mus. F. A.* XVII, 1919, pp. 64–65 (fig.). The portrait was probably painted about 1540 or 1542.

A Panel by Antonio Veneziano.—A panel in the Boston Museum of Fine Arts representing the Virgin and Child which formerly passed as the work of Spinello Aretino is attributed by R. OFFNER in *Art in America*, VIII, 1920, pp. 99–103 (pl.) to Antonio Veneziano, with the approximate date of 1376.

A Portrait Engraving of the Fifteenth Century.—In *B. Mus. F. A.* XVIII, 1920, pp. 29–30 (fig.), H. P. R. publishes a portrait of the artist and his wife by Israhel van Meckenem, recently acquired by the Museum of Fine Arts. It is the earliest engraved representation of a Master in the graphic arts and, with one possible exception, the only engraved portrait of the fifteenth century.

Fiorenzo di Lorenzo.—A splendidly preserved tempera painting by Fiorenzo di Lorenzo of the Madonna and Child with St. Jerome, a recent gift to the Museum of Fine Arts, is published by C. H. H. in *B. Mus. F. A.* XVIII, 1920, pp. 26–27. Besides its high quality and excellent state of preservation, it is notable as presenting much larger figures than usual with this artist, while less stress is laid on the landscape.

CLEVELAND.—**A Persian Bowl.**—In *B. Cleve. Mus.* VII, 1920, pp. 6–7 (3 figs.), J. A. M. publishes a ninth century Persian bowl from Rhages, which closely resembles Chinese pottery of the Tang dynasty. This likeness is explained by pieces of Chinese pottery found at Rhages, which were used by Persian potters as models. (See also G. B. L., *Faenza*, VII, 1919, pp. 78–79; fig.)

MINNEAPOLIS.—**Accessions to the Institute of Arts.**—Among recent accessions to the Minneapolis Institute of Arts are a painting of the City of Venice adoring the Virgin and Child, by Paolo Veronese, a fifteenth century German statue of St. Catherine in wood, and four examples of English wood carving, the figure of a bishop, fifteenth century, an Elizabethan chest, a seventeenth century statuette of Anselm, and a seventeenth century octagonal table elaborately decorated with human figures in relief and conventional designs. (*B. Minn. Inst.* IX, 1920, pp. 9–11, 17–19, and 33–38; 8 figs.)

NEW YORK.—**A Saint Veronica Tapestry.**—A Flemish tapestry in the collection of George and Florence Blumenthal, which has as its subject St. Veronica, is published by S. RUBENSTEIN in *Art in America*, VIII, 1920, pp. 145–147 (pl.). Besides its high artistic value, the panel is interesting as reproducing almost exactly a figure in one of the six tapestries of “The Foundations of Rome” in the Royal collection of Spain, and it is probably to be attributed to the same artist, Bernard Van Orley.

Flemish Tapestries.—In *B. Metr. Mus.* XV, 1920, pp., 3-7 (3 figs.), J. B. publishes two large Flemish tapestries, which formed part of a set representing the twelve months; the two recently acquired by the Metropolitan Museum represent August and October. The designs are attributed to Van Orley and presumably the tapestries were woven in Brussels about 1525.

Ivories in the Morgan Collection.—A brief review of the pre-Gothic ivories in the Morgan collection of the Metropolitan Museum is given by J. B. in *B. Metr. Mus.* XV, 1920, pp. 12-17. Among the examples described are the "ivory tower" with figures of the apostles, attributed to a Syrian artist of the sixth century, the consular diptych of Justinianus, Byzantine plaques and caskets, Carolingian bookcovers, and some Romanesque plaques, boxes, etc.

Prints by Dürer.—The Metropolitan Museum has recently acquired a set of prints by Dürer in which every authentic plate of the master is represented by at least one fine impression. The collection was made by Junius Spencer Morgan. (W. M. I., Jr., *B. Metr. Mus.* XV, 1920, pp. 33-34.)

Prints of Ornaments.—The Metropolitan Museum has recently acquired a number of prints of ornaments and books of unusual interest. They include fifteenth, sixteenth, and seventeenth century designs for jewelry, silverware, and other metalwork. (W. M. I., Jr., *B. Metr. Mus.* XV, 1920, pp. 53-58; 6 figs.)

Geoffroy Tory.—In *B. Metr. Mus.* XV, 1920, pp. 79-86 (4 figs.), W. M. I., Jr. describes the thirteen splendid woodcuts in the Parisian book of hours, dated 1545, the acquisition of which brings to the Metropolitan Museum its first representation of the work of Geoffrey Tory.

POUGHKEEPSIE.—**Etchings by Rembrandt.**—In *Art in America*, VIII, 1920, pp. 123-129 (pl.) O. S. TONKS describes a collection of etchings recently presented to Vassar College. Among these are some good examples of the work of Rembrandt, notably the portrait of Jan Six, Burgomaster of Amsterdam.

PROVIDENCE.—**A Persian Grave Monument.**—A Persian monument of special interest in that it gives the date of the work and the name of the artist has recently been acquired by the Rhode Island School of Design and is published by L. E. ROWE in the *Bulletin*, VIII, 1920, pp. 4-7 (fig.). The artist, Oustad Ahmed Vehen Achmeh, was an Arab and made this monument of Abul-ghassem in 1375.

TOLEDO.—**A Painting by Van Dyck.**—In *Art in America*, VIII, 1920, pp. 77-78 (pl.) B. M. GODWIN publishes a painting by Van Dyck lately presented to the United States and housed in the Toledo Museum of Art. The picture, the subject of which is St. Martin sharing his mantle with the beggar, is a preliminary sketch for the large altarpiece in the church of Sanventhem, between Brussels and Louvain.

WORCESTER.—**Acquisitions of the Art Museum.**—Among recent accessions to the Worcester Art Museum are a number of important paintings: two Madonnas, one from the school of Filippo Lippi, the other by Bernardino da Conti; an Adoration of the Magi, which originally probably formed part of a predella, to a large altarpiece and which is attributed by Sirén to Michele Giambono about 1450; a Crucifixion, probably by Spinello Aretino; and a St. Bartholomew, an early Spanish painting, the exact date and provenance of which have not been determined. Among the interesting works of sculpture are a marble head of David (?) attributed to Bernini, and four alabaster plaques with

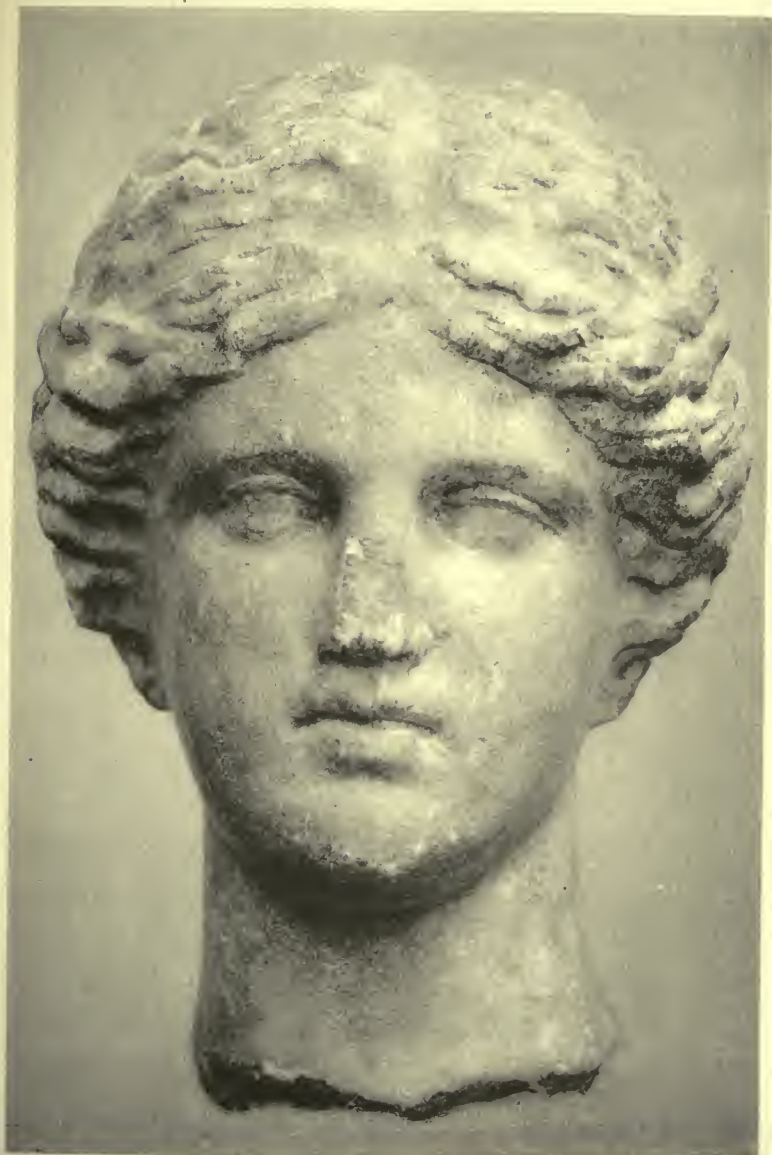
statuettes, of French origin, which once formed parts of two carved tombs now in the Victoria and Albert Museum. (R. W., *B. Worc. Mus.* X, 1919, pp. 65-73; 4 figs.; XI, 1920, pp. 2-5 and 7-15; 7 figs.)

AMERICAN ARCHAEOLOGY

GENERAL AND MISCELLANEOUS

PARIS.—**Acquisition of Mexican Manuscripts.**—The Bibliothèque Nationale has recently received from the Countess of Charencey about twenty manuscripts in different ancient languages of Mexico and Central America. They were formerly in the collections of Brasseur de Bourbourg and Alphonse Pinart, and are of great philological value. (*C. R. Acad. Insc.* 1919, p. 293.)

TORONTO.—**Acquisitions of the Ontario Provincial Museum.**—In the *Thirty-first Annual Archaeological Report* of the Ontario Provincial Museum, 1919, pp. 101-120 (20 figs.) C. B. ORR records the acquisitions of the Museum for the past year, comprising pipes, various objects of stone, etc.



HEAD FROM RHODES: FRONT VIEW.





HEAD FROM RHODES: PROFILE.

A MARBLE HEAD FROM RHODES

[PLATES II-III]

APOLLONIUS, the celebrated scholar and poet of Rhodes, describes here and there in his *Argonautica* specific works of art with such clarity and precision that some of the descriptions have been interpreted as referring to certain extant monuments.¹ In the first book of the epic the heroes are brought, on their adventure in the Argo, to the shores of the Lemnian Isle. There Hypsipyle, Queen of Lemnos, and her maidens, who had wearied of their manless state, determined in public assembly to receive the men of the Argo and repopulate their land. So the Queen's messenger was sent to summon Jason to the palace and he, responsive to the call, girded himself appropriately for the royal visit. Especially beautiful was the cloak he donned, on which were embroidered many notable scenes.² And on it, too, "was wrought deep-tressed Cytherea bearing the swift shield of Ares; and from her shoulder to the left elbow the fastening of her chiton was loosed beneath the breast; and opposite in the bronze shield her image appeared clear to the view to behold."³ A well-known statue of Aphrodite, in the Museum of Naples, found at Capua, has been associated with these words of the Rhodian poet, and the suggestion has been plausibly entertained that Apollonius is referring to the prototype of a series of works, of which the Aphrodite from Capua most nearly reproduces the original, but which with certain stylistic modifications includes also the Aphrodite from Arles in the Louvre and the Aphrodite from Melos.⁴ Therefore the head of a goddess of this type, found in the island of Rhodes itself, is an object of peculiar artistic interest, which is not les-

¹ H. de la Ville de Mirmont, *Apollonios de Rhodes et Virgile*, pp. 453 and 614. Compare Bernoulli, *Aphrodite*, p. 22.

² Apollonius Rhodius, I, 730 ff.

³ *Ibid.* I, 742-746.

⁴ Furtwängler-Sellers, *Masterpieces of Greek Sculpture*, p. 387. The three statues are well shown for illustrative comparison in Brunn-Bruckmann, *Denkmäler Griechischer und Römischer Sculptur*, plates 296, 297 and 298.

sened by the intrinsic beauty of the sculpture which it is the purpose of the present paper to discuss.

This head, which is illustrated on Plates II and III, was acquired by me some years ago in Rhodes, and there is no reason to doubt the vendor's word that it was found in the island. It is about two-thirds life-size, having a total height from chin to crown of 140 mm. and a width of 121 mm. measured at the widest point, between the outer fringes of the hair above the ears. The material is a marble of fine crystals, evidently Parian, of which the surface is now entirely covered by a beautiful golden patina. The head is well preserved except for a slight but sad injury to the end of the nose. The shape is pronouncedly round, with a cephalic index of 83.¹ The hair, which is divided by a broad parting on top, and bound by a narrow fillet in front, is combed low on either temple with a resultant triangular shape imparted to the brow. In fact the hair is brought unusually low upon the face and consequently the elevation of the forehead is small. The bridge of the nose is broad and firm and serves to accentuate the characteristically delicate treatment of the eyes. Too much attention can hardly be devoted to the artist's method of rendering the eye, as the eye, especially when considered with the mouth, is the touchstone of our sculptor's style. At right angles to the nasal bone the eyebrow extends in a straight line until the outer end of the eye is passed when it slightly droops above the swelling muscle of the lid. The eyes themselves are narrowed by the drawing together of the eyelids, perhaps to indicate concentration of gaze. The upper lid is marked by an emphatic extension beyond the junction with the lower at its outer end, and at the inner commissure the tear duct is carefully modeled. The lower lid is noticeable for its gracefully rounded contour which gives gentle transition from ball to lid and from lid to cheek. Extraordinarily applicable to these eyes is the description of the Petworth Aphrodite by Furtwängler, in his *Masterpieces*, to the following effect:² "The master hand is above all manifest in the surpassing beauty of the eyes, which are a veritable mirror of the soul. In this respect, too, only the Hermes of Praxiteles can stand comparison. In both we find the same rounding of the ball and the same treatment of the lids, which

¹ This figure is only approximate as the measurements in each direction must of necessity include the hair.

² Furtwängler-Sellers, *op. cit.* p. 345.

are not sharply detached from the eyeballs; the under lid is peculiarly characteristic in its exquisite delicacy, being almost imperceptibly defined against the ball and the cheek."

The distance between the eyes of the Rhodian head is broad but the nostrils are narrow and refined, with gentle modeling on either side. The full artistic appreciation of the nose is hampered by the injury it has suffered, but no great effort of the imagination is necessary for its mental restoration. It must, however, be remembered that the accidental blunting of the nose has a reciprocal effect on the appearance of the upper lip, which was made to be more or less shadowed by a longer nose. The mouth is marvelously delicate and sensitive. The lips, which are slightly parted, are forceful and living, as well as gracefully curved in every line. At their corners the use of the drill is visible but not conspicuous and especially noteworthy is the consciously harmonious transition between the lower lip and the surrounding surface of the chin.¹ The full rounded chin and the subtle modeling of the cheeks convey an impression of mature feminine beauty, which is confirmed by the noble carriage of the head upon a graceful neck.

The view of the head in profile on the left side, as shown in Figure 3B, more clearly reveals how delicately the texture of the flesh of the neck is suggested, when the casual turning of the head to the left produces illusive wrinkles in the skin. From this side, too, it is possible adequately to study the arrangement of the hair. The locks are combed sideways from the central parting, caught in place by a fillet that is bound low on the forehead and then brushed back from either cheek with sweeping strokes, to be fastened behind in a knot, from which several strands escape and falling rest upon the neck. The artist has striven to modify the monotonous effect of the lateral mass of this hair by introducing a raised curl in its midst, but in general the hair is not wrought with that delicacy of finish that characterizes the neck and the salient features of the face. The impression conveyed is that of a piece of work blocked out on large lines to be seen from a distance rather than rendered in detail for minute inspection.

Is it possible to name the Goddess whom this head portrays? For it will not be doubted that divinity is here suggested both in nobility of conception and in dignity of poise. The luxurious fulness of the cheeks, the delicate rotundity of the chin, the arched

¹ Furtwängler-Sellers, *op. cit.* p. 345.

bows of the lips, the soft appealing eyes are elements of ideal feminine beauty which are here combined sufficiently to characterize the Goddess of beauty and of love, and without fear of contradiction we may venture to assert that this is she

“Fair, and with all allurements amplified,
The all-of-gold made, laughter-loving Dame.”¹

Worship of Aphrodite was not popularly cultivated in the island of Rhodes, as far as available records inform us of Rhodian religion. Athena of the Lindians was, of course, the great Goddess of Rhodes, of invincible power and of world-wide fame,² but nevertheless priests of Aphrodite are named in several inscriptions³ and reference is frequently made to the Aphrodite brotherhoods, the ἀφροδισιασται.⁴ Furthermore it will be recalled that the entire vicinage of Rhodes is redolent with the fragrance of incense burned in homage to the Goddess of Love, in nearby Cyprus, on the east, honoring the Paphian Queen, or westward at Cnidus before the all-glorious statue of Aphrodite of the Fair Winds. Moreover in Rhodes itself one of the most beautiful vases found in the excavations at Camirus is decorated with an exquisite painting of Aphrodite riding on a swan.⁵ One cannot doubt that sculptors of the Rhodian School made many statues of Aphrodite and it would not be strange if some of them had been dedicated in Rhodes.

Further evidence in support of the identification of our head and in determination of its stylistic affiliations must now be sought in the study of its artistic qualities in comparison with related works.

In the Imperial Kunsthistorisches Museum of Vienna is a well-preserved marble head which was purchased in Tralles, and added to the Museum collection of antiquities in 1871.⁶ It was published in 1880, with two unsatisfactory plates, by Otto Benndorf in the *Archaeologisch-epigraphische Mitteilungen aus*

¹ Chapman, *Translation of the Homeric Hymn to Aphrodite*, ll. 109-110.

² H. Van Gelder, *Geschichte der alten Rhodier*, pp. 313 ff. Ch. Blinkenberg, *L'image d'Athèna Lindia*, *passim*. C. Torr, *Rhodes in Ancient Times*, pp. 74 f.

³ I.G. XII, fasc. 1, 705, 736, and according to a plausible restoration in 786.

⁴ Van Gelder, *op. cit.* p. 337.

⁵ Salzmann, *Nécropole de Camiros*, pl. 60. C. H. Smith, *Catalogue of the Greek and Etruscan Vases in the British Museum*, III, D 2, p. 389.

⁶ *Übersicht der kunsthistorischen Sammlungen des allerhöchsten Kaiserhauses*, p. 84.

Oesterreich.¹ It is shown in Figure 1 in full-face view on the left for purposes of comparison with the front view of the Rhodian head on the right.² The heads offer many noticeable similarities. Their shape is round, the face oval, the parting in the hair deep and broad; in front a single fillet binds the hair, which is brushed low on the forehead, and back on each side to conceal the upper part of the ear. In each case the bridge of the nose



A

B

FIGURE 1.—A: HEAD FROM TRALLES; B: HEAD FROM RHODES.

is broad, the eyebrows straight, the eyes long and narrow, and the mouth small. In the Tralles head, too, the lower eyelid and the under lip are carefully modeled so as to make a pleasantly graduated transition with the adjoining surface of the skin. Further comparison of these heads from a different point of view may be profitably made by studying the picture of the Rhodian head shown in Figure 2 by the side of the reproduction of the head from Tralles given by Lucy Mitchell on Plate XIX of her *Sele-*

¹ IV, 1880, pp. 66 ff., pls. I and II.

² Professor Young, of Columbia University, kindly provided me with the photograph from which this view of the Tralles head was made.

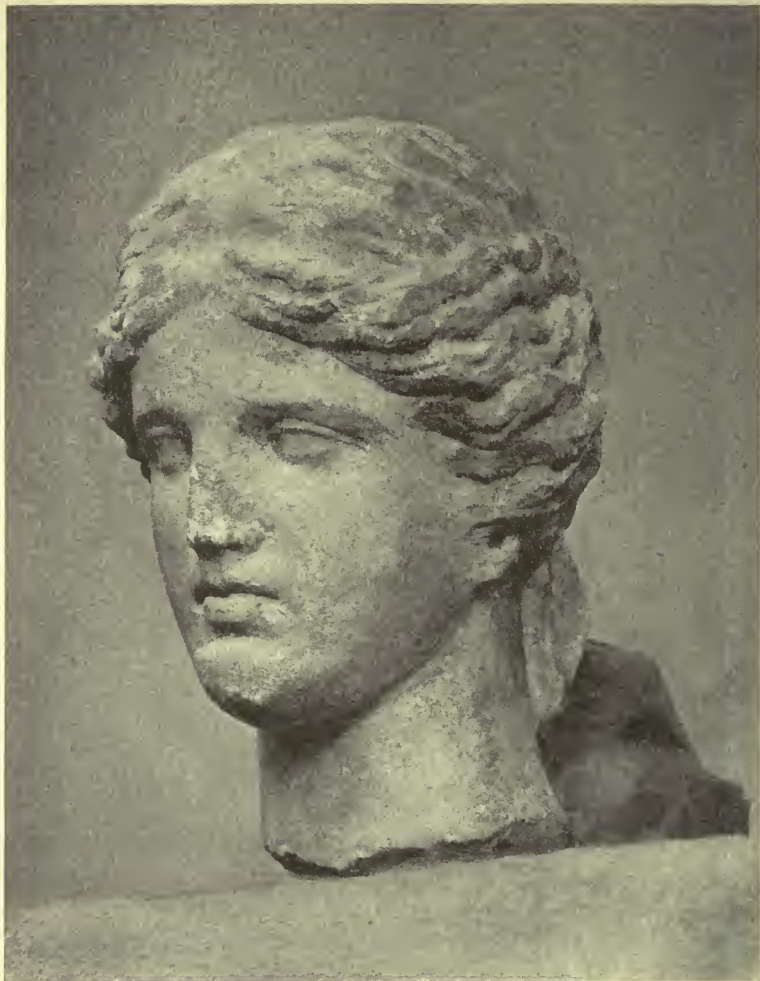


FIGURE 2.—HEAD FROM RHODES; THREE QUARTERS PROFILE.

tions from Ancient Sculpture. Indeed in this juxtaposition several differences are clearly in evidence, which are somewhat accentuated by the fact that the Mitchell photograph of the Tralles head was made from a plaster cast. Attention should be particularly directed to the hard line about the nostrils which does not exist on the Rhodian face, to the conspicuousness of the drill holes in the corners of the mouth, to the dimple in the chin, and

to the extent to which the ear is revealed by the treatment of the side hair.

Benndorf, in concluding his study of this Aphrodite head from Tralles, states¹ that in view of the outline of its profile, the accentuation of the nasal bone, the small height of the nostrils, the small mouth, the short upper lip and the dimple in the chin, it must be assigned to the same time and school which produced the Hermes of Olympia. With this opinion, too, Furtwängler in general concurs when, in the *Masterpieces*, he declares his belief that "its artist evidently imitated Praxiteles, from whom he may have been separated only by a generation or two."² In order to emphasize this relationship Lucy Mitchell³ places the head from Tralles by the side of a small marble head, found at Olympia, whose Praxitelean resemblances are energetically reiterated by Professor Treu in the third volume of the Olympia publication.⁴ Treu does not hesitate to suggest the possibility that the Olympia head is from the very hand of the master, and compares it to no disadvantage with another head from Tralles, the so-called von Kaufmann copy of the Cnidian Aphrodite.⁵ A characteristic feature of the head from Olympia is the treatment of the hair, which is left apparently in a rough, unfinished state, its finer details being suggested but not completed. This observation is also strikingly true of the Hermes of Olympia, the casual finish of whose hair is a studied means of producing beauty of effect.

The front view of the Rhodian head, when placed beside the Cnidian Aphrodite shows even more marked resemblances than were apparent in the comparison of the Olympia and the von Kaufmann heads. Particularly noticeable is the similar treatment of the eyebrows and eyes, the bridge of the nose, the sensitive nostrils, the small mouth and rounded chin. The contour of the face is almost identical, except on the forehead, which is made much lower on the Rhodian head because the hair is brought unusually far forward.

With these Praxitelean features of our head firmly established, it is now in order to study the Rhodian head comparatively in its relation to a work to which it exhibits the greatest affinity,

¹ *Op. cit.* p. 72.

² Furtwängler-Sellers, *op. cit.* p. 398.

³ *Selections from Ancient Sculpture*, pl. XIX. Compare her *History of Ancient Sculpture*, p. 599.

⁴ *Olympia*, Text, III, p. 206; Tafel LIV, Nos. 1 and 2.

⁵ *Olympia*, Text, III, p. 206.

the Aphrodite of Melos (Fig. 3). It is well known that the statue of the Melian Aphrodite is somewhat larger than life-size, the actual height being 2.038 meters. It is thus a little less than one-third larger than life. As has already been noted the Rhodian head is about one-third smaller than life, and indeed in its essential proportions it is just one-half the size of Aphrodite's head. This statement will be sufficiently substantiated by the citation of two measurements: the width of the neck of the Rhodian goddess is 65 mm., of the Aphrodite of Melos 130 mm.; the distance from the root of the nose to the furthest limit of the back hair is 145 mm. on the Rhodian head, 290 mm. on the Aphrodite of Melos. To be sure all the dimensions do not proportionately coincide with this degree of exactitude, but the only serious divergence occurs in the case of those measurements which are taken from the roots of the hair above the center of the forehead, for, as has been emphasized before, the hair of the Rhodian head is represented as growing disproportionately low upon the brow.¹

Apart, then, from the dissimilar shape of the triangulated foreheads the faces are seen to be very like if the view of the Rhodian head shown in Figure 2 is placed beside a three-quarter profile of the Aphrodite, such as that given by Mitchell on Plate XVIII. In this comparison the similarity is evident in the structure of the bridge of the nose and the eye complex. The characteristic eyebrows are identical in shape, and the upper lid of the eye extends peculiarly beyond the lower at the outer end. It must be remembered that the nose of the Aphrodite is restored and that some little restoration has also been wrought on the lips.² A hard

¹ Measurements of the Rhodian head compared with those made from a cast of the head of the Aphrodite of Melos are as follows:

	Rhodian Head	Aphrodite		Rhodian Head	Aphrodite
Chin to crown.....	140 mm.	273 mm.	Outer corner of eye to		
Greatest width.....	121 "	245 "	lobe of ear.....	57 mm.	112 mm.
Ear to ear.....	72 "	149 "	Chin to mouth.....	30 "	57 "
Chin to roots of hair...	95 "	210 "	Root of hair to root of		
Chin to root of nose...	73 "	148 "	nose.....	26 "	66 "
Chin to inner corner of			Root of hair to nostrils	57 "	133 "
eye.....	61 "	129 "	Root of hair to inner		
Chin to outer corner of			corner of eye.....	38 "	85 "
eye.....	64 "	138 "	Root of hair to mouth	67 "	155 "
Thickness of neck....	65 "	130 "	Distance between inner		
Corner of mouth to			ends of eyes.....	17 "	35 "
outer corner of eye..	37 "	76 "	Distance between outer		
Corner of mouth to			ends of eyes.....	48 "	93 "
lobe of ear.....	53 "	103 "			

² Ravaissou, *La Vénus de Milo*, p. 65.



FIGURE 3.—A: HEAD OF APHRODITE OF MELOS; B: HEAD FROM RHODES.

line about the nostrils is visible here, like that noted on the head from Tralles, and the drill marks in the corners of the mouth are more noticeable than on the Rhodian example, but the contour of the chin in each case, and its modeling, show a remarkable resemblance. In the manipulation of the hair, as seen in the side view of the head in Figure 3B, the general principle of arrangement is the same, though differences in the treatment of details may be observed. The chief difference, however, is a difference of technique rather than of style, the hair of the Melian head being carefully executed and fully finished in all its details, while on the head from Rhodes the hair is handled in a very sketchy manner, without much regard for accurate articulation of the several locks. On the other hand, there is extraordinary accord between the two heads in an unusual feature of hair arrangement. The side hair on each head is brushed back over the ear to a knot behind, where it is fastened, and from this fastening three strands of hair fall down on the back neck. This characteristic manner of head-dress, together with uniformity of conception and similitude of execution, marks the two heads as very closely related. Can the nature of this relationship be more precisely determined?

Benndorf, in his study of the head from Tralles, considers that its interpretation must rest on one of two hypotheses; either it

is a free copy of the Aphrodite of Melos, or else both works go back to a common original.¹ He decides in favor of the latter alternative and assigns this supposititious original to the school, if not to the hand, of Praxiteles. Furtwängler, however, while accepting the Praxitelean character of the head thinks that it has "only quite general traits in common with the Melian statue."² Now the Rhodian head, in comparison with the Melian, does not exhibit the characteristics that might be expected to be apparent in a reduced copy. The features are too delicately and too finely finished, and the mouth, in particular, shows an evident refinement of the lines of the Aphrodite. The hair of the Rhodian head, on the contrary, is left in a comparatively rough state, apparently for purposes of contrast with the finished fineness of the features. Such a device is a familiar characteristic of Praxitelean style and has been noticed as a frequent phenomenon on heads associated with Praxiteles and his school.³ That there is, however, a distinct relationship between the Melian and the Rhodian works has been abundantly proved, and while it is hazardous to make categorical assertions about an isolated head the possibility suggested by its discovery in Rhodes cannot be avoided. It may reasonably be an independent copy, made in the fourth or third century B.C., of the prototype of the Aphrodite of Melos, which may have been dedicated in Rhodes, and there have been a familiar sight to the poet Apollonius, who takes particular pains to describe it.

But whatever view may be taken of the affiliations of our Aphrodite in the sequence of style, or whatever may be thought of her artistic valuation, the intrinsic beauty of the Rhodian head is indisputable, and we may enthusiastically apply to it the restrained words of the Greek anthologist, referring to another head in another place:⁴ "τῆλοθεν ἐκ νήσοιο Ῥόδου τέχνασμα ποθεινόν," a desirable work from the far-distant island of Rhodes.

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¹ *Op. cit.* p. 70.

² *Masterpieces*, p. 398.

³ In addition to the heads already mentioned there should be compared in this connection the "Aberdeen" head in the British Museum, well shown in *Masterpieces*, pl. XVIII, and the head of a goddess in Berlin found at Pergamon, Bulle, *Der schoene Mensch*, pl. 258.

⁴ *Anth. Pal.* App. I, 317; cited by Van Gelder, *op. cit.* p. 408.

PRIMITIVE AEGEAN ROOFS

IT is a refreshing commentary on the energy and ingenuity of the human mind,—and also perhaps upon its inconclusiveness,—that after the long series of attempts to reconstruct the primitive Doric frieze, it should still be possible to advance a new, or at least a novel, restoration. Such a restoration, quite different from anything proposed in modern times, was recently presented by Professor Washburn¹ in this JOURNAL. The subject can hardly be definitely settled until every possible restoration shall have been presented, but in the meantime it is worth while giving careful criticism to all that are suggested, to determine which seem within the limits of probability. I, therefore, desire to point out certain respects in which Washburn's premises and conclusions appear to me to be unsound.

The kernel of his new theory is that the *metopes* of the Doric frieze, in stone architecture, represent the ends of horizontal beams used in an earlier flat-roof architecture of wood and clay, and Washburn prefaces his reconstruction with the statement that "it will not be possible to settle definitely the question of flat roof versus pitched roof."²

In classic times, as far back as we have any evidence, the Doric roof is known to have been a pitched roof, while the pre-Doric Mycenaean roof is generally supposed to have been flat.³ Washburn assumes that one was derived from the other and that the details of the Doric frieze were developed after Mycenaean times but before the roof began to slope.

Now as it has been apparently impossible to trace any continued development from Mycenaean to Dorian culture in the other arts,—pottery, ornament, costume, etc.,—the *a priori* assumption, quite commonly made, that there is a developmental connection between the architecture of the two civilizations is open to serious question. And unless there is a reasonable assur-

¹ A. J. A. XXIII, 1919, pp. 33-49.

² *Op. cit.* p. 42.

³ Leroux, *Les origines de l'edifice hypostyle* (*Bibl. des écoles fr. d'Athènes et de Rome*, fasc. 108) Paris, 1913, maintains that the Mycenaean megara had pitched roofs (pp. 51-70).

ance that the Doric roof was once flat, it seems rather futile to base the details of a reconstruction on that assumption.

As a matter of fact the question of the different roof-constructions of primitive architecture is by no means incapable of settlement. In most cases the plan of a building indicates very clearly the general type of roof that covered it. The roofs of the pre-hellenic Mediterranean have already been most fully and intelligently discussed by Leroux.¹ Mackenzie,² in reviewing the same ground, has arrived at somewhat different theories. Neither the one nor the other is correct in all points, but both have shown that the problem is not one to be abandoned as altogether hopeless.

If we consider primarily roof constructions in which timber is used, and exclude, therefore, beehive tombs and the like, a brief survey of known primitive architecture throughout the world shows us three distinct types. The first is that in which poles are firmly planted in the earth at their lower ends and being fastened to one another at the top in the form of a cone are supported there by mutual thrust alone. This is the type of our American Indian *tepees*. Where the space to be covered is great and the stiffness of the poles available is relatively slight, the latter are bowed upwards to prevent them from sagging under the weight of the roof covering,—thatch, felt, skins, matting, etc.,—producing a domical hut. This is the type found in American *wigwams*, in the "*kibitkas*" of the nomads of the Asiatic steppes, in the grass huts of Africa,³ and generally in primitive round houses the world over.⁴ Such a roof construction is naturally expressed by a circular plan, and conversely circular plans naturally indicate this roof construction. I know of no people who habitually cover a circular plan with a flat roof. Therefore it is quite probable that this type of roof originally covered many, if not all of the pre-historic circular foundations recently uncovered in Greece.⁵

¹ *Op. cit.*

² 'Cretan Palaces and the Aegean Civilization,' particularly Pt. IV, *B. S. A.* XIV, 1907-08, pp. 343 ff.

³ This type and the other two hereafter described are all well exemplified in Africa. Cf. Ankermann, *Anthropos*, I, 1906, pp. 581-584.

⁴ Innocent, *The Development of English Building Construction*, p. 8, describes similar conical huts built by charcoal burners in England, Sweden, France, and Germany. These are covered with brush or with sods laid face in. The sods are in some cases lapped like tiles.

⁵ At Orchomenos, Bulle, *Orchomenos*, I, pp. 19 ff.; at Eleusis, 'Αρχ. Έφ. 1898, pp. 29 ff.; Pfuhl, *Ath. Mitt.* 1905, pp. 331 ff.; Poulson, *Dipylongräber*, pp. 14 ff.

In some of the African constructions a central post is used to support the upper ends of the rafters,¹ which in such case are rigid, but this is a comparatively rare construction. So far as I know there is no evidence of a central support in any of the Greek round houses.

In its most primitive form the entrance to a round hoop-roofed house is merely a hole in the thatch with a flap of skin or felt to cover it. But before long this entrance is given a definite form by carrying the thatch of the dome out to an upright hoop



FIGURE 1.—PRIMITIVE APACHE HOUSE.

planted in front of it (Fig. 1). This vertical entrance-gable obviously gives much better protection from the weather than the sloping hole in the domical hut. But evolution did not stop there; the hoops in front of the opening were soon multiplied,—a light ridge lashed *upon* them where the poles, bent over from both sides, crossed at the top, serving to keep the hoops properly spaced,—and the house with a horseshoe shaped plan was formed.

The foundations of this shape uncovered at Olympia,² Orchomenos,³ Chalandriani,⁴ Rakhmani⁵ and Rini⁶ could hardly have had other than hoop roofs. There is no trace of any support for

¹ Ankermann, *op. cit.* A centre pole is also used in the larger huts of European charcoal burners, Innocent, *op. cit.*, p. 11.

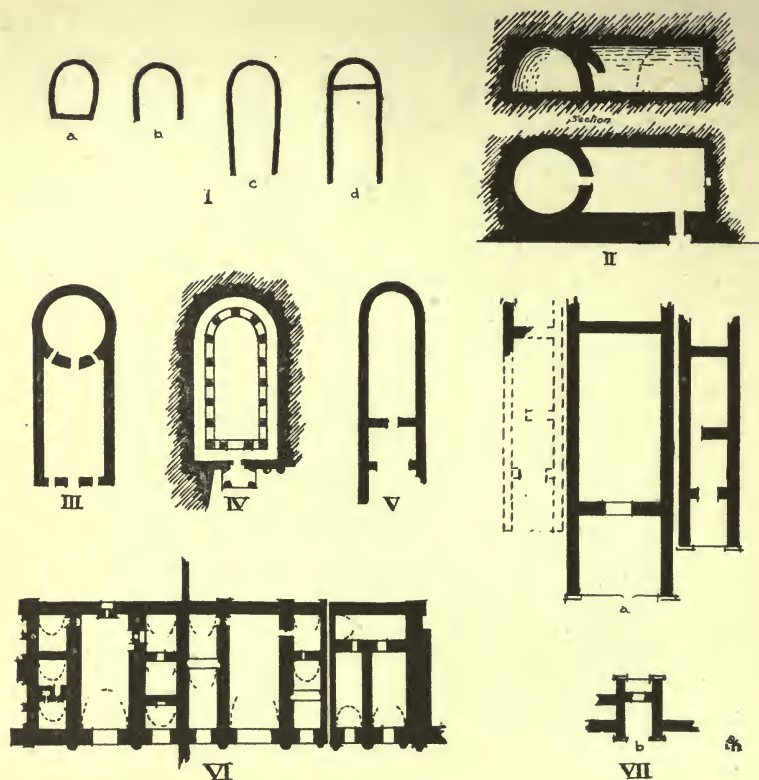
² Dorpfeld, *Ath. Mitt.* 1908, pp. 185 ff.

³ Bulle, *op. cit.* pp. 34 ff.

⁴ 'Αρχ. 'Εφ. 1899, pp. 118 ff.

⁵ Wace-Thompson, *Prehistoric Thessaly*, pp. 37 ff., fig. 17.

⁶ *Ibid.* pp. 132 ff., fig. 80.



Typical Hoop Roof Structures
Various Scales

FIGURE 2.—I, HOUSE FOUNDATIONS, OLYMPIA, GREECE: II, CAVE, BEHAR, INDIA; SECTION AND PLAN: III, VILLAGE CHAITYA-HOUSE, INDIA: IV, ROCK-CUT CHAITYA (19), AJANTÂ, INDIA: V, ROCK-CUT CHAITYA, DHUMNAR, INDIA: VI, PALACE AT HATRA, MESOPOTAMIA: VII, PALACE AT TROY; A, GREAT HALLS; B, PROPYLAEUM.

a ridge-pole, the long apsidal-ended structures of Olympia lacking even a front wall (Fig. 2, I). It is not at all likely that the side walls were arched across with a masonry or brick vault.

From the horseshoe-shaped plan it is only a short step to that in which the side walls are parallel. But since in the latter form the height of the roof is of course constant, it is necessary to fill in the upper part of the entrance end with some sort of a framework

to reduce the size of the opening, or else to close it with a wall in which a door is left. And there is nothing to prevent using such a wall to close both ends of the tunnel, giving an elongated rectangle in plan. This latter scheme is naturally suggested where a wall is used to close the front, but where no masonry enters into the construction, it is simpler and more efficient to carry the hoop-roof construction unbroken around a semi-circular rear end.

Hoop roof construction is admirably exemplified in the early architecture of India (Fig. 2. II, III, IV, V). It is clearly shown on the Bharhut sculptures,¹ where in some cases the ends of the houses are curved in plan and in other cases rectangular, and is accurately reproduced in stone in the rock temples of Kârlê and Ajantâ (Fig. 3).² It is not impossible that the flexibility of such a roof gave rise to the horseshoe arch of Mohammedan art³ or that the original domed hut of Mesopotamia⁴ was merely a wigwam thickly covered over with clay.⁵ And the barrel-vaulted structures of Sassanian architecture recall sharply the close relationship of the



FIGURE 3.—INTERIOR OF CHAITYA HOUSE
XXVI: AJANTÂ.

¹ Havell, *Ancient and Mediaeval Arch. of India*. pls. IV, A; IX, A.

² *Ibid.* pls. XVIII, XIX, XLVIII.

³ Cf. Rivoira, *Architettura Musulmana*, pp. 113 ff.

⁴ Layard, *Monuments of Nineveh*, 2nd ser. pl. 16. Plates 24, 36, and 50 show walled towns in which the houses have flexible domed roofs supported by central and diagonal struts, much as the ribs distend an umbrella.

⁵ In the so-called "Tombs of the Giants" in Sardinia the stone slabs which serve as façades seem to represent a hoop fastened at the lower ends and tied

Iranians and the Aryans (Fig. 2, VI).¹ But I am not at all convinced that this curvilinear construction is in any way connected with cave dwellings as Leroux suggests² or with the beehive tombs. The latter probably originated as a mound of earth or a cairn built over a grave, the coffin being later enlarged to form a chamber. This same scheme is shown in the tumuli of Etruria³ and the pyramids of Egypt, which certainly developed quite independently of the domestic architecture of the living.

In prehellenic architecture most notable examples of these long barrel roofs, like the tops of prairie wagons, must have covered the great halls of Troy II (Fig. 2, VII). Leroux⁴ points out that the narrow space which separates the lateral walls of one from another is certain indication that the roofs were not flat, but drained to both sides. Furthermore, the size of the largest hall (10 m. x 20 m.) with no trace of interior supports, would make a flat roof impossible. For the same reason a roof construction resting on a ridge pole would be impracticable without the use of trusses, which were certainly not known at that time. The only reasonable construction there is one in which the roof members were arched across to the middle from both sides, their butts being planted in the earth or thrusting against heavy and probably not very high side walls.⁵

The second type of roof is that in which flat beams are laid horizontally on the tops of vertical walls and the whole then cov-

across horizontally at mid-height to prevent undue spreading as in the English "cruck" roof construction. In reality as Mackenzie has clearly shown (*B. S. R. V*, pp. 89 ff.) these structures are developments of the megalithic dolmen, the carving of the façade stone recalling the horizontal roof of the dolmen and the facing of stone upon the mound of earth that covered it. There is no connection here with any frame construction.¹

¹ A distinct form of hoop roof, with the hoops—called "crucks" or "siles"—held in by tie beams, as in a truss, has even persisted until modern times in England. The "crucks" are curved but rigid and the ends of the buildings are square. (Innocent, *op. cit.*).

² *Op. cit.* pp. 19 ff.

³ Cf. Dennis, *Cities and Cemeteries of Etruria*, 2nd ed., Vol. I, p. lxix, note Q, and p. 387. The architectural decorations of Etruscan and Mycenaean tombs are only a late addition reflected from the architecture of the living.

⁴ *Op. cit.* p. 54.

⁵ The hoop-roof nave of the rock-cut Chaitya house at Kârlê has a clear span of 7.5 m. (Ferguson, *Hist. of Arch.* III, p. 117.) This is certainly an accurate copy of contemporary wooden structures, which not being rock-cut were probably somewhat larger.

ered thickly with brush and clay. The earliest habitations thus formed were probably partially or wholly excavated in the side of a hill; the roof, level with the upper ground or nearly so, serving to form an artificial cavern of the whole.¹ The plan is naturally rectangular. This is the type of structure used by the Indians of our southwest. It may easily have been originated by cliff-dwelling folk; it is not necessarily older or younger than the curvilinear, sloping roof type, for neither one seems to develop from the other, but it marks a distinct difference in the civilization employing it. The rectangular flat-roof is a permanent structure and belongs to a fixed habit of life, while the round, demountable, sloping roof bespeaks a nomadic or semi-nomadic origin (Fig. 4).²

It is evident that whereas in an oblong structure with a hoop-roof the entrance is almost necessarily at one end,³ in a flat roof structure it may be on any side. It is also evident that if such a dwelling be partially excavated, it will be easier to stretch it along rather than to drive it deep into the side of a hill. And in such cases the flat roofed house naturally has the poles which compose its roof laid from front to rear, instead of from side to side across the longer span.⁴ The hooped roof house may increase in length with ease, but great width is a very difficult matter; in the flat roof house, however, the width can be increased easily, and a single large transverse beam or girder makes it possible to double

¹ As in the winter *iglus* of the Esquimaux. It is interesting to note that the permanent winter houses of these people are rectangular with flat or "ridge pole" roofs, while the temporary summer tents are conical "tepee" structures. Cf. Murdock, *Ethnological Results of the Point Barrow Expedition*. pp. 72-78 and 83-86.

² Cf. Mackenzie, *B. S. A.* XIV, 1907-08, p. 356, and above, note 2. It might be supposed that the form of roof would be dependent on the climate or the available building materials. The existence of the hoop roof huts of the vagrant Apaches alongside of the flat roof settlements of the Pueblo Indians indicates that culture is more important than climate or materials.

³ In the Bharhut sculptures houses are shown which are oblong in plan, rounded at both ends, and with a door at the side. Similar primitive houses have been found in western Europe (Innocent, *op. cit.* p. 12). This type may be due merely to the awkwardness of a door in a curved end, or, quite possibly,^{*} is derived from two huts of horseshoe plan set face to face for mutual protection, as shown on the relief of Nineveh (Layard, *op. cit.*). This type, however, is unusual.

⁴ As in the ancient structures of Mitla, where the entrance façades are always the long sides. Cf. Holmes, *Archaeological Studies among the Ancient Cities of Mexico*; add also Fig. 4 X.

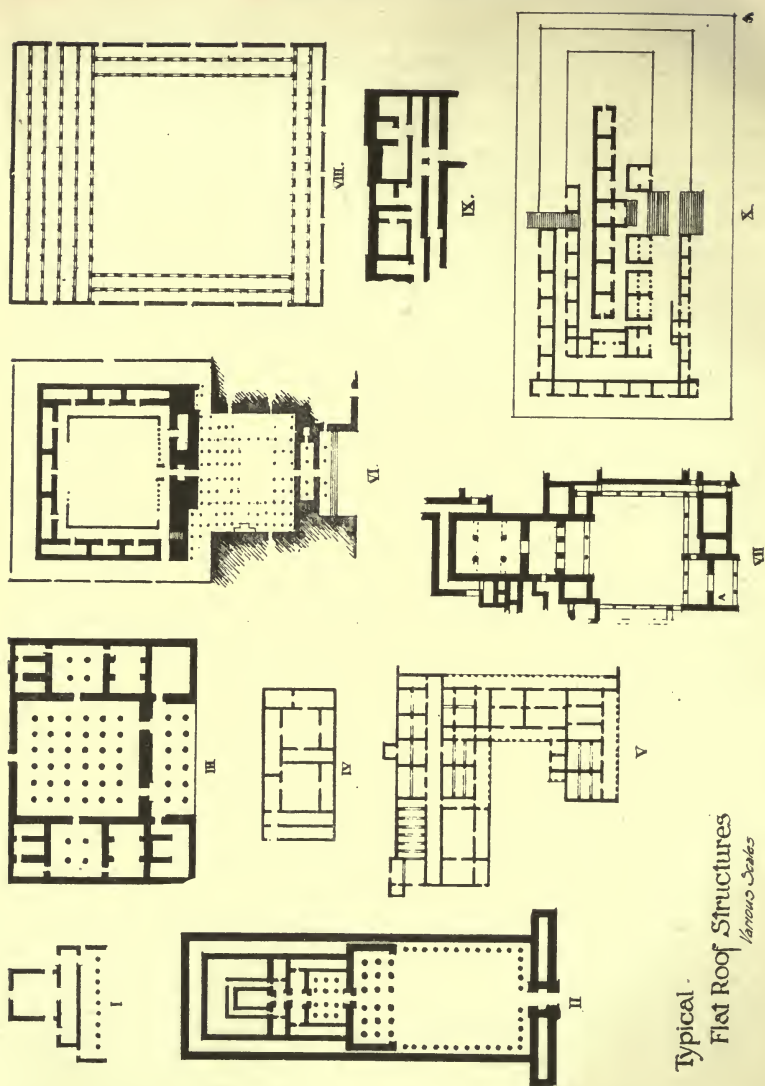


FIGURE 4.—I, HOUSE AT KAKOUN, EGYPT: II, TEMPLE AT EDFU, EGYPT: III, PALACE AT PERSEPOLIS, PERSIA: IV, HOUSE AT TIMBUCTOO, AFRICA: V, MONASTERY AT KALAT SAM'AN, SYRIA: VI, TEMPLE AT LHASA, THIBET: VII, PART OF PALACE, THIRYNS, GREECE: VIII, MOSQUE AT CAIRO, EGYPT: IX, PART OF PALACE, GHA, GREECE: X, PALACE AT SAYIL, YUCATAN, THREE TERRACES.

the depth (Fig. 5). But the greater the width, the greater the size required for the girder, or the more numerous the supports required to sustain it; consequently the flat roofed unit is normally nearly square without supports, or transversely elongated like a portico, or is a large square area formed of a series of such porticos, divided by walls or rows of columns, in which case each unit is considerably wider than deep.

The flat roofed construction is strikingly illustrated in the Cretan palaces. Even were it not that the juxtaposition of such a number of various units could hardly have had sloping roofs on account of the difficulty of draining the valleys and pockets which would be formed,¹ the characteristic plan of the units, divided

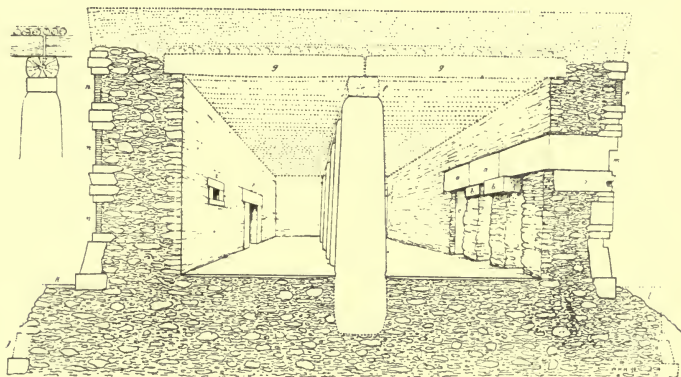


FIGURE 5.—HALL OF THE SIX COLUMNS: MITLA.

from side to side by walls or rows of columns supporting transverse girders, leaves no room for doubt whatever.² The palace of Gha³ (Fig. 4, IX) is, on a smaller scale, very similar to that of Cnossus. In both cases the main structure consists of two wings at right angles to each other. Each wing was composed in the upper story of a series of approximately square rooms of varying

¹ Leroux, *op. cit.* p. 54. Cf. Noack, *Homerische Paläste.* pp. 12 ff., fig. 8.

² The corridor-like magazines in the palace of Cnossus are, of course, only basement structures, the great halls above were evidently nearly square, and in one at least the roof was supported by a transverse beam resting on two columns, the foundations of which appear in magazines 7 and 9.

³ *B. C. H.* XVIII, 1894, pp. 271 ff., pl. XII; de Ridder claims that because no stairs were found, the palace must have been but a single story high. Cf. plan in *A. J. A.* XXIII, 1919, p. 292. There are, however, no stairs in the "pueblos" of our southwest, ladders being used for safety's sake.

sizes opening on a narrow terrace, which in the foundations is shown as a corridor. The double corridor at Gha is an indication that this palace ran up, in certain places at least, to three stories. The effect must have been very similar to our Indian pueblos, and is quite clearly shown on a silver vase from Mycenae.¹ The same arrangement is found in the small rooms against the east wall of the palace enclosure at Tiryns, in a house to the southeast of the grave-ring at Mycenae² and in the palace of the third city at Phylakopi³ in Melos.

The great halls of Tiryns and Mycenae (Fig. 4, VII), however, are quite different in type from those of Crete, as Leroux⁴ and Noack⁵ have clearly shown. In the first place they are set directly on the ground level instead of being raised upon a terrace platform of basement structures. Again the main room in Greece is considerably deeper in relation to its width than is found in Crete, and the entrance through portico and prodromos with narrow doors, is quite different from the open façades of the island palace halls. But though the plans are different, the methods of construction were undoubtedly the same. Leroux⁶ is led by the passages around the smaller *megaron* and across the back of the larger one at Tiryns, to believe that these were covered with sloping roofs, the passages serving to provide drainage space for rain-water. The *megaron* of Mycenae is similarly separated from the walls of surrounding structures, as is also that of Phylakopi. To me it seems probable that at Tiryns the two great one-storied halls were built at a later period than the smaller-roomed multi-storied structures which flank them to the east and west, and that to provide communication between the terraces of these older buildings it was necessary to carry a "chemin de ronde" at mid-height around the back of the great halls. The supposition that these passages were not for roof drainage, is strengthened by the fact that the corridor is carried across the back of the great *megaron*, where it would be quite unnecessary for drainage, while on the other hand, the constructions to the west of the great *megaron* abut directly against its wall. Leroux⁷ notices this but dismisses

¹ Tsountas and Manatt, *The Mycenaean Age*, p. 213, fig. 95.

² Schliemann, *Mycenae*, Plan B.

³ Mackenzie, *Excav. at Phylakopi*, fig. 49.

⁴ Leroux, *op. cit.* pp. 103, ff.

⁵ Noack, *Ovalhaus und Palast*, pp. 35 ff.

⁶ *Op. cit.* pp. 55 ff.

⁷ *Op. cit.* p. 56.

it as unimportant. At Phylakopi the corridor marked (2) which flanks the east wall of the *megaron* is evidently the basement of the terrace on which the upper story rooms to the east opened.¹ And the *megaron* is with little doubt a later structure built directly against the outer terrace wall of the older palace. The isolation of the *megaron* at Mycenae is also easily accounted for on the same hypothesis of later construction. So, while the narrow space (less than 1 m.) between the great halls at Troy may well indicate some sort of sloping roofs, I do not think that the corridors of twice that width in the Mycenaean architecture of Greece do so at all (cf. Fig. 2, VII and Fig. 4, VII). Aside from this the Greek plans clearly denote a flat roof construction, exactly similar to that of Crete. Though the halls as a whole are longer than they are wide, they are broken by transverse divisions—at Tiryns and Mycenae two columns bearing a cross girder, then two walls, then two more rows of two columns each,—into divisions which are roughly twice as wide as they are deep. There is no good reason to doubt that the roof structure was composed of horizontal round beams laid close together, spanning, from front to rear, the spaces between transverse walls and girders, and covered with a thick bed of brush and clay, exactly as depicted in Minoan frescos, as carved on the façade of tombs at Tiryns and Mycenae, and as reproduced in the later architecture of the Lycian tombs.²

The obvious explanation of all these resemblances and differences in plan and construction is that a thoroughly Cretan civilization was responsible for the palaces of Gha and the older terraced structures of Tiryns and Mycenae, and that men of a different race, accustomed to long *megara* opening on the ground level, and to fireplaces, gaining the ascendancy in Argolis, ordered great new palace halls to be built and decorated for them by craftsmen of the older régime.³ The plan would approximate that to which the outlanders were accustomed and which they could easily describe, the construction and decoration would remain like that of Crete.⁴ The same difference between theme and workmanship

¹ The fact that this east wing of small intercommunicating rooms has no communication with the exterior, proves that they are only basement structures, entered perhaps by a ladder from the upper story.

² Cf. Holland, *A. J. A.* XXI, 1917, pp. 120, 122, and fig. 3.

³ Cf. Mackenzie, *Phylakopi*, pp. 269–271 for similar change of cultural influence in Melos.

⁴ Compare the churches of Barletta and the Cathedrals of Aversa, Acerenza, and Venosa built in southern Italy under the direction of the Normans between

is found in other products of the period, *e.g.* the gold death-mask from Mycenae where a face with a non-Cretan beard is executed by one trained in the Minoan gold-workers' art.¹ It is not impossible that these conquerors were the "fair-haired" Achaeans, and that the halls which they remembered from another land and had reproduced by their conquered workmen, were similar to those of Troy II, perhaps with the barrel roofs. In this connection the resemblance in plan of the Mycenaean propylaea to that of Troy II should be noted; those of Greece presumably had flat roofs, while the Asiatic form, with a deep entrance and no columns between the flanking walls was probably hoop-roofed (Fig. 2, VII B; Fig. 4, VII A); the gateways of Crete are of a definitely different plan. It may be that the prototypes of the *megara* of Argolis were the crude halls of Dimini² and Sesklo,³ whose plans appear to indicate a flat roof of clay on timbers running parallel to the main axis of the building and supported in turn by transverse walls and rows of two columns each. On the other hand though these remains are of the stone-age, that period lasted to such a late date⁴ in Thessaly that the *megara* of Dimini and Sesklo are probably later than the second palace of Cnossus, and may themselves be the result of Cretan or even of Mycenaean influence. Such questions of cultural origin and influence cannot be decided with any sureness from the scanty material at hand, but what can be positively stated is that though the arrangements of the great halls are similar, the roof construction of Tiryns was quite different from that of Troy II, but was quite like that in Crete, though here the arrangements are different in plan.

There is a third type of roof construction which partakes of some of the characteristics of each of the foregoing. In this the roof slopes from the centre to either side, as in the hoop roof, but, as in the flat roof, with a median transverse girder supporting the actual roof timbers; the rafters here rest at one end upon this

1050-1200. The plans are distinctly northern French, the workmanship wholly southern Italian. Cf. Cummings, *Hist. of Arch. in Italy*, II, pp. 37-41.

¹ Schliemann, *Mycenae* (No. 474) Eng. ed. p. 289. This is the opinion of Dussaud, *Les Civilisations préhelléniques*, pp. 283-284.

² Tsountas, *Προϊστορ. ἀκροπολεις*, p. 50, fig. 9. Wace-Thompson, *op. cit.* pp. 79 ff., figs. 38 and 39. Leroux, *op. cit.* p. 32, fig. 11.

³ Tsountas, *ibid.* pp. 89 ff., fig. 18; Wace-Thompson, *ibid.* pp. 65 ff., fig. 34; Leroux, *ibid.* pp. 33-34, fig. 13. The remains here are not sufficiently definite to be sure proof of anything.

⁴ *Ann. Arch. Anth.* 1908, pp. 118 ff., 216 ff.

central ridge-pole and at the other upon the tops of the walls, instead of thrusting against them.¹ The rafters are also necessarily straight and rigid. This third type may have developed from the first by the introduction of a supporting ridge under the summit of the hoops (the rod which kept the tops of the hoops properly spaced having been laid *upon* them in the earlier type), or from the second by simply raising the transverse girder somewhat above the front and rear walls it parallels. It may also have developed quite independently of either by the elongation of a round hut with a central post supporting the upper end of rigid rafters, as the tent with two upright poles and a ridge between is developed from the conical tent with a single upright in the centre. Or it may have developed in all of these ways in different localities. The important thing is the influence which such a roof has on the plan of the building it covers.

Like the hoop roof, the roof sloping two ways from a ridge-pole cannot be widened by a multiplication of parallel units, as in the case of the flat roof, because of the difficulty of draining the valleys that would be formed. But like the flat roof borne on girders it cannot be extended greatly in length without intermediate supports for the ridge. Any large structure built on this system must, therefore, be long and narrow, as with the hoop roof, with a median wall or row of columns to uphold the ridge, as with the flat roof borne on girders (Fig. 6).² It is possible, of course, to dispense with the obstruction of the central colonnade, by supporting the ridge on transverse girders from wall to wall, provided that the distance between these side walls is not great, but such a construction, beside necessitating a very narrow plan, is much less obvious than that of direct columnar support³ and can hardly have been as early a form. The idea of placing intermediate supports under the transverse girders themselves and so, by means of a double row of columns, securing considerably greater width, is evidently a still more sophisticated scheme.

¹ Innocent (*op. cit.* p. 11) does not distinguish between ridge-poles which actually support rafters and those which merely hold them in place. His own Fig. 5, in which a roof of planks is very obviously supported by the ridge, confutes his statement as to the non-sustaining character of this member.

² According to Innocent (*op. cit.* p. 17 ff.) the ridge roof supported on axial columns was the earliest form in Denmark, the roof on "crucks" being developed later. These axial posts are still to be found in Denmark, Jutland, the Fünen Isles, Sweden, south Germany, and Switzerland.

³ Cf. Leroux, *op. cit.* p. 79.

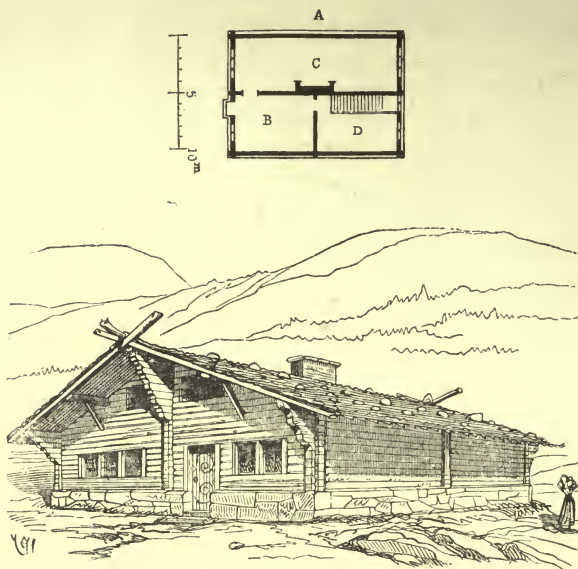


FIGURE 6.—HOUSE WITH RIDGE-ROOF; VOSGES.

The first of these types has been found at Sesklo¹ and at Troy VI,² dating presumably from the Mycenaean period; and probably before the eighth century in the temple of Artemis Orthia at Sparta.³ Later examples are found at Thermos,⁴ Locri,⁵ Paestum,⁶ in the temple of Apollo at Metapontum,⁷ in the little temple to the south-east of temple C at Silenus,⁸ at Neandria,⁹ Eretria,¹⁰ and perhaps Thasos.¹¹ As Washburn points out,¹² the temple

¹ Tsountas, *op. cit.* pp. 102 ff., pl. III, 24, A, 2.

² Dörpfeld, *Troja und Ilion*, I, pp. 170 ff., fig. 63. The foundations of this structure are not at all complete.

³ *B. S. A.* XIV, pp. 17 ff., figs. 5, 6, 7, pl. I; XVI, p. 26.

⁴ Sotiriades, 'Εφ. 'Αρχ. 1900, pp. 161 ff.; *Records of the Past*, I, 1902, pp. 173–181; *Ant. Denk.* II, 5, pl. 49.

⁵ Koldewey and Puchstein, *Die Gr. Temp. in Unteritalien u. Sicilien*, p. 3, pl. I.

⁶ *Ibid.* p. 17, pl. II.

⁷ *Ibid.* p. 39, fig. 38.

⁸ *Ibid.* p. 92, fig. 64.

⁹ Koldewey, *Berl. Winckelmannsprogramm*. LI, 1891.

¹⁰ *Arch. Anz.* 1911, col. 123.

¹¹ *C. R. Acad. Insc.* 1912, pp. 212 ff.

¹² *Op. cit.* pp. 44–45. His contention that a single row of interior columns is evidence of a flat roof seems to me quite untenable. It is much more likely that the temple was narrow because the builders knew only how to use a single row, than that only a single row was used because the temple was narrow.

built upon the foundations of the *megaron* at Tiryns¹ was also probably of this type. At Olympia there are two round-ended structures flanking the Bouleuterion² which have median rows of columns and date from the sixth to the fifth century, or perhaps are built on even earlier foundations. These curvilinear examples make plausible the theory of Leroux³ that the rectangular plan developed from a horseshoe-shaped plan for the ridge roof as well as for the hoop roof; in which case the progenitor of the ridge roof would probably be the round hut with a central post to support the peak.

This whole discussion may seem far removed from the question of the origin of the triglyph frieze, but the accurate distinction of roof forms is really of the utmost importance. I think it may be clearly seen from the foregoing:

I. That prehellenic architecture was not of a simple uniform type; Mycenaean roof construction being in no way related to the curvilinear structures of prehistoric Greece, nor to those of Troy II, though practically identical with the southern flat roof construction of Minoan Crete.

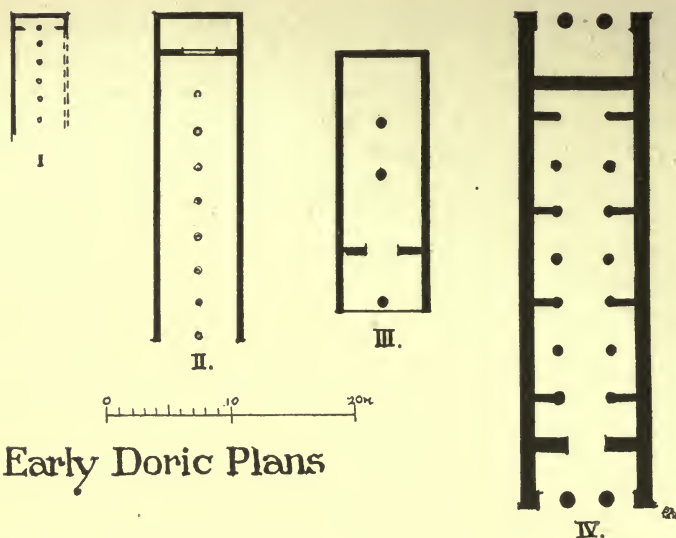
II. That the earliest Doric structures (Fig. 7) distinctly indicate a third type of roof, sloping two ways from a ridge pole, which

¹ Frickenhaus, *Tiryns* I, pp. 2-13, dates this structure as of the seventh century, associating with it a Doric capital found on the acropolis. In a very interesting paper read at Pittsburg, Dec. 1919, Carl W. Blegen of the American School of Athens maintained that this capital had no connection with the foundations, that the latter were built before the earlier foundations of the great *megaron* had been buried, and were probably decadent work of the end of the Mycenaean period. In support of this he cited the statement that Mycenaean sherds were said to be found "all over the site" at the time of the first excavations. Unfortunately there is no possible way now of verifying this statement or definitely establishing the date of the foundations from the contents of the strata above them. So while I feel certain that the dating of Frickenhaus is much too late, I do not feel that it is impossible for these second foundations to have been built by Dorian conquerors immediately on the ruins of a Mycenaean palace destroyed by them.

Mr. Blegen also showed the plan of a house recently excavated at Corinth, in which a rectangular room entered from its narrow side was divided medially by two columns. This structure was certainly dated as Mycenaean or "Ephyrean" by the pottery found above it. The other houses uncovered near by must have had flat roofs because of their irregular plan, and Mr. Blegen claims that the roof of this one was also flat. The plan certainly suggests a roof sloping two ways, but until the plans of the whole excavation have been examined it would hardly be wise to express an opinion of this particular structure.

² *Olympia, Bauwerke*, I. pp. 76 ff., pl. 55; Pfuhl, *Ath. Mitt.* 1905, p. 370.

³ *Op. cit.* pp. 71-78.



Early Doric Plans

FIGURE 7.—I, TEMPLE OF ARTEMIS ORTHIA, SPARTA, VIII c.: II, OLD TEMPLE AT THERMOS, VIII-VII c.: III, TEMPLE (?) AT TIRYNS, X-VII c.: IV, TEMPLE OF HERA, OLYMPIA, LATE VII c.

had no resemblance to the Mycenaean roof and was without doubt brought in by the Dorian invaders from the north.¹

It is evident then that Noack's restoration of the Mycenaean roof², which Washburn seems to endorse, is correct in that he has made it flat with roof beams running from front to back, but also that his desire to develop primitive triglyphs from the ends of these beams has lead him to give them a size and to space them in a manner altogether unwarranted by any other Minoan construction.

It is also evident that if the Doric roof did not develop from the flat Mycenaean roof, but was from the beginning a sloping construction,³ neither triglyphs nor metopes could possibly be derived

¹ The common practice of giving the name "Megaron" to all large halls in prehellenic ruins, and considering them all indiscriminately the progenitors of the Greek temple, is an exceedingly unscientific proceeding not warranted by the archaeological evidence at hand. Cf. Washburn, *op. cit.* p. 34.

² *Jb. Kl. Alt.* I, 1898, pp. 654-668. This reconstruction was made prior to the great excavations in Crete. I have no doubt that with the material which is now at hand Noack would amend his details in many respects.

³ That this was the case is shown by the fact that the soffit of the horizontal Doric stone cornice is always sloped, while in the Ionic form where the roof was originally flat, the soffit is always horizontal, even though the roof above be

from the ends of roof beams, for, as Washburn implies,¹ only a heavy flat roof could in any way justify such enormous timbers.

In this connection I should like to point out that even in his own restoration Washburn has not dared to make the layer of clay above the beams as thick as it should be to warrant their great size. In the Lycian tombs where the beams are represented as being in immediate juxtaposition, the layer above is slightly over three times the beam height;² in the stone Ionic architecture derived from a similar construction but with the dentils, which represent the beam ends, slightly separated, the corona above is never less than the dentil height;³ in the drawing which Washburn gives of the church in Cochiti Pueblo⁴ the spaces between the beams are at least twice their width yet the layer above is at least twice their height. But in Washburn's Doric reconstruction⁵ the beams are separated by less than their own width, and yet the clay covering is less than their own height in thickness. Even this is far heavier than Doric forms would suggest, for there the corona is regularly *less than one-third* the height of the frieze. The change in proportion from a beam supporting a mass two or three times its height to one where the mass is only one-third its height, implies an absolute loss of all sense of the construction involved, quite at variance with the intensely structural appearance of other Doric details.

Washburn has raised two objections to my own suggested reconstruction⁶ which I think are easily answered. The first is that the brick piers backing the triglyphs are too frail to stand in a country subject to earthquakes. These piers I have shown as one and a half bricks (or feet) wide, set three and a half bricks on

sloping, and in the raking cornice of the Doric pediment the cornice is also horizontal. The sloping soffit of the Doric horizontal cornice of the pediment is difficult to explain except on the assumption that this member developed originally on the side of the building and was carried across the front by analogy, which is directly contrary to Washburn's ideas (see p. 339) or on the theory that a roof actually sloped down toward the end of the building as well as toward the sides, as in the Etruscan temples (see below, p. 340 and Fig. 8).

¹ *Op. cit.* p. 47.

² Holland, *op. cit.* fig. 3.

³ On the Caryatid porch of the Erechtheum and the choragic monument of Lysicrates the space from the top of the dentils to the top of the corona is slightly more than twice the dentil height.

⁴ *Op. cit.* fig. 1, p. 35.

⁵ *Ibid.* fig. 8, p. 46.

⁶ *A. J. A.* XXI, 1917, pp. 117-158, pl. VII.

centres, and as being ten bricks ($2\frac{1}{2}$ feet) high. The thickness might be one, one and a half or two bricks. Now, as Washburn recognizes, a similar construction of brick piers was employed upon the walls of Athens, and was presumably found stable, for it was rebuilt along the original lines. But the size of the piers (he says) is unknown. The restorations of Müller, Choisy, and Caskey¹ all agree in making the piers along the front of the wall two bricks square by ten bricks high and separated by an open space two bricks wide. I see no reason to doubt the essential correctness of these dimensions, though I have given reasons why I think it possible that the width of the piers was even somewhat less.² But though these piers are slightly heavier than mine, the pillars on the inner side of the same wall are very much lighter.

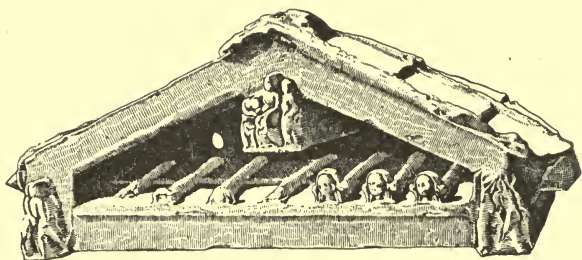


FIGURE 8.—MODEL OF AN ETRUSCAN TEMPLE: NEMI.

They are described as being two bricks thick and seven feet apart! They could not well have been more than one brick wide, since they probably centered on the piers on the outer side of the wall which are spanned by eight foot lintels. The height could not possibly have been less than that of a man. If such pillars as these with such spacing were able to resist the earth tremors, I cannot see why those I have suggested should find the slightest difficulty in doing so.

His second objection is that my restoration develops the frieze along the side of the temple rather than across the front. I agree with him that the frieze probably appeared on the front of the temple before it appeared on the side, but I should go further and say that it crowned a solid front *wall* long before it appeared above

¹ Caskey, *A. J. A.* XIV, 1910, pp. 298-309, gives a list of other restorations and a discussion of those mentioned here.

² *Op. cit.* p. 156.

the columns of a portico.¹ For as Guadet² keenly points out, the use of a wooden cap (the *taenia* and *regulae*) upon a wooden architrave is wholly absurd from any constructional point of view.³ And even before the frieze appeared on the temple face, it was probably used as a cap to other fortified walls. It is such a wall that I have intended to represent, an abstract wall, not any particular part of a temple whatever. Nevertheless, my drawing might represent the front wall of a primitive temple as well as a side wall. It is true that in classic stone construction the horizontal cornice across the front is not the edge of an actual roof, but there is at least a suggestion that it represents a primitive construction like that shown in the Etruscan temple models from Nemi and Satricum⁴ where the roof of the portico slopes forward to the horizontal cornice, under the main roof sloping to the sides (Fig. 8).

LEICESTER B. HOLLAND.

PHILADELPHIA, PA.

¹ It is not at all impossible that the temples at Orchomenos (Bulle, *Orchomenos*, I, p. 94; pl. III) and Sparta (*B. S. A.* XIII, pl. 2) were neither *prostyle* nor *in antis* but rather had a front wall opening into the pronaos by a door, or by two doors if the cella was divided by a median row of columns. Cf. the old temple of Locri in its first state (Koldewey and Puchstein, *op. cit.* I, pp. 2 ff., fig. 3).

² *Elements et Théorie de l'Architecture*, I, pp. 342 ff.

³ In Choisy's reconstruction (*Histoire de l'architecture*, I, pp. 287 ff.) he could evidently find no reasonable structural excuse for a *taenia* upon a wooden architrave; wherefore he omits it altogether from the wood combination, though he shows it in the derived stone form.

⁴ Rizzo, *B. Com. Rom.* XXXVIII, 1910, pp. 281 ff.

DOCUMENTS RELATING TO THE WILL OF LUCA DI
SIMONE DELLA ROBBIA

THE notary's copy of the Last Will and Testament of Luca della Robbia was discovered by Giovanni Gaye and a partial transcription of it was published by him in his *Carteggio inedito d'artisti dei secoli XIV, XV e XVI*, printed in three volumes in Florence during the years 1839-1840. Since then this transcription has been accepted without question, and it has been cited verbatim at least twice, first by Maud Cruttwell¹ and again by Professor Allan Marquand.² Some months ago I decided to collate Gaye's transcription with the original and soon saw that it was far from satisfactory. Gaye had copied only a part of the instrument; had omitted a number of words, which perhaps he was unable to decipher; had made a number of mistakes, more or less important, in transcribing others; and in the case of the clause dealing with the small legacy to the Opera di Santa Maria del Fiore had fallen into grievous error. Accordingly, in view of the importance of the document, I determined to make a careful revision of Gaye's version and to decipher and transcribe the portions of the will which had not been copied by him. My work has been done with the greatest care and, so far as I know, an accurate and complete transcription of the will now appears in print for the first time. I also present a hitherto unpublished photograph of the second page of Ser Agnolo's record which is of great interest as it shows the changes which Luca made in his will after the first draft had been prepared.

The documents³ presented are: I, the Registration Entry of the will; II, Gaye's version of the instrument, cited from Professor Marquand's *Luca della Robbia*; III, my own revised and complete transcription; IV, a Mandate, given to Simone della Robbia

¹ *Luca and Andrea della Robbia and their Successors*, pp. 304-305.

² *Luca della Robbia*, pp. xxvii and xxviii.

³ It is a pleasure to express my hearty appreciation of the courteous aid, which I have received from Dr. Achille de Rubertis and Dr. Giovanni Cecchini, of the Florentine Archives, in deciphering certain difficult portions of the documents.

by his uncle, Luca; V, Gaye's version of the Power of Attorney, given by Luca to Simone to decline for him the office of Consul of the Guild of Masons and Woodcarvers—cited from Professor Marquand's *Luca della Robbia*; VI, my own revised and complete transcription. Documents Nos. I and IV have never been published, even in part.

The first document was discovered by Gaetano Milanesi and his transcription was found by me in his *Miscellanea*. I have endeavored to locate the original record but without success. The "*Registro di Santa Maria Novella, No. VII*" exists but the Registration Entry does not appear on page 46 or on any other page of this *Registro*. Nor does it appear in any of the other *Registri di Santa Maria Novella*, a complete series of which exists. For all the *Registri* of the four Quartieri (Santa Croce, San Giovanni, Santa Maria Novella, and Santo Spirito) there are indices *by name of testator*, the references being to the various *Registri* by number. In one of these indices labeled "Santa Maria Novella—San Giovanni," and referring to the *Registri*, No. VII of the respective Quartieri, I found Luca's name as testator, but the reference was to *San Giovanni, No. VII*, not to *Santa Maria Novella, No. VII*. A consultation of the inventory of the *Appendice dell' Archivio Notarile* revealed the fact that the entire series of the *Registri di San Giovanni* no longer exists. We must, therefore, assume that No. VII, at least, of this series was in existence when Milanesi made his transcription, that it has disappeared since then, and that Milanesi, through an inadvertence, gave the wrong reference.

Ser Agnolo's copy of the will (Documents II and III), drawn by him for Luca della Robbia, covers two pages of the bound volume in which the notary kept copies of all the testaments drawn by him during the years 1442 to 1489. Almost all of the record, in which we are especially interested, was written in his own handwriting, which, as will be seen from the photograph, is regular and not very difficult to read. A comparison of Document II with Document III shows that Gaye dismissed the opening clause with a few words and that he omitted all of the second clause prior to "*Lucas*" and also all of it after the word "*decedere*." It will also be observed that a number of words in the third clause were not transcribed by him.

When Gaye dealt with the fourth clause, he went very far astray for he interpreted what was merely the usual small testa-

mentary provision to cover the expense of registration as a positive legacy of 18 Florins to the Opera. It is only just to him to state that the handwriting is a little difficult at this point; but, had he referred to previous wills, he would have found this identical clause again and again, and so clearly written as to be easily deciphered. Just how he was led astray in making his copy it would be difficult to explain without a photograph to show the original text. However, if the reader will look carefully at the abbreviation for the "*con*" in the word "*confectum*," the next to the last in the photographed text, and bear in mind that this same abbreviation was used for the "*con*" in the word "*constructioni*" in the fourth clause, he will at once understand the origin of the figure "9" in Gaye's transcription.

The fifth clause is by far the most interesting one in the will. It will be seen that, while there are omissions and misreadings (some of them important), in the main Gaye's transcription is accurate. This clause throws a most interesting side light on Luca's character and on his sense of responsibility toward his two nephews. Andrea had been taught to bear his mantle as sculptor and master of terracotta. Therefore, the *atelier*, with its good will, credits, and documents, should with propriety be bequeathed¹ to Andrea, and as the business was an exceedingly prosperous one the exercise of it would ensure a comfortable and dignified existence for him and his family.

Simone, on the other hand, had not been taught anything by his uncle and, inasmuch as the residuary estate did not equal the value of the business bequeathed to Andrea, it seemed to Luca that in making Simone sole heir of the residuum of his property, he had made a proper and equitable division of his possessions between his two nephews.

A careful study of the photograph reveals several points of interest. The first draft of the fifth clause very evidently did not seem to be sufficiently strong and convincing to Luca. Accordingly, to intensify his statement as to the lucrativeness of the atelier he had the phrase beginning with *usque* and ending with *superlucrarj* added; and as the notary probably did not wish to rewrite his copy he wrote the alteration in the margin. It will also be noted that, in the fourth line, the text read originally

¹ The wording of the text would seem to indicate that, if Luca had not actually consigned the *atelier* to Andrea, he had every intention of doing so at an early date.

posset and ending with *idcircho* was an addition to the first draft of the will to support Luca in his action regarding Simone. And finally the sixth, and last, clause, which in the first draft was expressed in two lines, was entirely rewritten and amplified in the strongest possible legal phraseology and it was added to the notary's copy below his signature at the end of the first draft. The notary then wrote his signature again below this revised clause. As this revision bears no date it was probably composed on the same day as the rest of the will. Certainly it was written before the instrument was executed and presented for registration. The executed draft must have contained all the additions and alterations, to which attention has been called, and after the word *idcircho* the revised last clause took the place of the two-line clause in the first draft.

In 'Unpublished Documents Relating to the Will of Andrea della Robbia'¹ I pointed out that this will appears to have brought about a serious misunderstanding between Andrea and his brother, Simone. Andrea's family, at the time Luca's will was drawn, consisted of his wife and four children. When Luca died in February 1481 (modern style 1482), Andrea's children were eight in number. While, therefore, Luca's superlatives in referring to the lucrativeness of the *atelier* were doubtless justified by the facts, Andrea may well have thought that what was amply sufficient for the proper maintenance of six was not enough for ten. He may also have reasoned sardonically that the *atelier* was of little use to him except as he made it profitable by his own efforts, while, on the other hand, Simone, without any effort on his part, had already received a handsome gift of 750 Florins (Doc. IV²) in cash from Luca and probably also had inherited more cash and other property after Luca's death. For the development of this misunderstanding I refer the reader, who may be interested, to my article mentioned above.

Luca appears to have had either a weakness for, or strong sense of duty toward Simone. Prior to the will we have documentary evidence proving that such special interest existed on his part.

¹ A. J. A. XXIV, 1920, p. 138.

² The mandate, given to Simone by Luca, possibly indicated that the latter feared that some objection might be made to the will, after his death, and that, therefore, he wished to be sure that Simone actually received the money. Or it may have been merely a desire on his part to have the pleasure of making the gift in person. It is fair to assume that by this time, if not before, the *atelier* had been transferred by him to Andrea.

In 1465 Simone matriculated in the Guild of Masons and Woodcarvers, through the powerful influence of his uncle, as is shown by the following unpublished document:

"Simone di marco della robbia recognovit matriculatum luce eius patruj die XVIIJ Augustj 1465."

[*Archivio di Stato, Arte dei Maestri di Pietra e Legname, Libro dei Matricolati, segnato Arti II, Cod. 2 c. 125⁺*.]

In 1471 Luca gave power-of-attorney (Documents V and VI) to Simone to decline for him the office of Consul of their Guild as Luca stated that he was not able on account of age and infirmity, to perform the duties of the office.¹ This document was discovered by Gaye and published in part by him in his *Carteggio*. His transcription (Doc. V) has already been quoted by Miss Cruttwell and Professor Marquand from whose *Luca della Robbia* I have cited. Document VI is my revised and complete transcription. It will be noted that Gaye not only gave the date incorrectly and misread certain words, but that he also omitted the latter, and very interesting, half of the original.

It is rather difficult to explain Luca's marked consideration (even if we may not call it favoritism) for Simone except on the ground of personality. Certainly there can have been no artistic bond between them for such documentary evidence as we have all tends to demonstrate that Simone had nothing of the genius displayed by his uncle and brother. While it is doubtless true that Simone was not actively employed in Luca's *atelier* he must have constantly seen his uncle and brother at work; and had the spark of genius been in him it would have shown itself under the stimulus given by such an atmosphere. In 1485, when Simone left the family home on Via Guelfa, a certain Matteo da Terra Rossa, a *fornaciaio* (furnace man—in this case a firer of terracotta), is mentioned as making a payment for Simone which was credited to the account of Andrea by the Capitolo di Santa Maria del Fiore which owned a ground lease on the della Robbia home. This reference would seem to show that Matteo and Simone were associates.

¹ In *L'Arte* XXII, 1919, p. 243, I published the only account existing between the Guild and Luca. It shows that Luca, or possibly Simone as his attorney, acted as member of the Council for the last four months of the year 1471. Also that, either personally or represented by Simone as his attorney (we do not know which was the case), he was counselor or consul for the first third of 1474, the last third of 1475, the second third of 1477, and the first third of 1480. And that, either in person, or Simone for him, he served as *Sindaco* for the last four months of 1475.

In 1495/96, when Andrea was making the *tondi* for the portico of the Ospedale di San Paolo, documents show that this same Matteo and his brother, Marco, sons of Paolo da Terra Rossa, *fornaciai* supplied material (probably roofing or paving tiles) for the portico, and that Simone was associated with them, as after his name the expression "*sta colloro*" is used. It may, therefore, safely be asserted that Simone's knowledge of the art of terracotta was limited strictly to the firing part. In justice to him it should be noted that, while he appears to have been a man of mediocre ability, yet there must have been some big element in his mental equipment as his son, Luca, became one of the greatest Latin scholars of his day.

DOCUMENTS

I

Ser Agnolo di Cinozzo di Gio. Cini (da Cascate) Lucas olim Simonis Marci della Robbia scultor condedit testam(entum) 1470 19 Febbruarii Simonem Marci Simonis della Robbia eius nipotem ex fratre. (*Archivio di Stato, Registro di S^a M^a Novella*, VII a c. 46. Cited from Milanese, *Misc.* 39 III p c. 20.)

II

Testament of Luca della Robbia 1471 (Old Style 1470).

"In Dei nomine amen, Anno Domini etc, 1470, indictione iv. et die 19 februarii, presentibus—septem fratribus S. Marci.

Lucas olim Simonis marci della Robbia, scultor, civis florentinus, de populo S. Laurentii de Florentia, sanus mente, sensu, corpore, visu et intellectu, nolens intestatus decedere, etc. . . .

Imprimis quidem animam suam omnipotenti Deo ejusque gloriose Matri humilter et devote recommandavit—et sepulturam corporis sui elegit eo loco et cum illis funeris expensis, prout videbitur suo heredi.

Item reliquit et legavit opere Scē Maria flor. 9 et novem floren. fabrice dicte opere.

Item legavit—domine Checche ejus nipote et filie olim marci Simonis della Robbia, vedue, flor. aur. centum, quos solvi voluit per ejus heredem.

Item dicens—qualiter ipse habet duos nipotes ex fratre, videlicet Andream et Simonem fratres, et filios Marci Simonis della Robbia, et qualiter ipse Lucas tempore vite sue docuit artem suam sculpture dictum Andream, et adeo quod ipse Andreas per se ut magister potest exercere artem dicti Luce, et eidem Andree in vita ipsius Luce reliquit omnem creditum dicti Luce, et adeo quod ipse Andreas mediante industria dicti Luce et ejus documentis habet artem lucrativam adeo, quod usque in hodiernum diem satis superlucratus est, et hodie superlucratur, et in futurum actus est superlucrari, cum ipsa arte et ejus exercitio potest facillime et honorifice familiam suam nutrire, et dictum Simonem nihil docuit in vita sua; et considerans quod omnia bona non sunt sufficientia nec tanta, quanta industria dicti Andree, quam ipse habet Andreas mediante donatione dicti Luce, et volens ut dictus Simon habeat aliquod ex

bonis dicti Luce, et ne posset tam a dicto Simone quam ab hominibus intelligentibus de ingratitude reprehendi, in omnibus ejus bonis heredem instituit dictum Simonem, ejus nepotem predictum etc.”

[*Archivio Generale di Firenze, Rogiti di Ser Agnolo di Cinozzo*. Quoted by Cruttwell, pp. 304–305, from Gaye, I, pp. 184–185.]

III

(In margine: Et publicavi ut hic et Restituj dicto Simonj heredi)

1470 (modern style 1471) die xviiiij Februarij

In Dei Nomine Amen Anno Domini ab Eius Salutifere Incarnatione Millesimo quadringentesimo septuagesimo Indictione iiij^a et die xviiiij^o mensis Februarij Actum Florentie in refectorio Fratrum Sci Marci de Florentia presentibus Fratre Honofrio Andree Honofrij de Florentia

Fratre Alessandro Filippi de Florentia

Fratre Antonio Angelj dellaione (?)

Fratre Stefano Stefanj

Fratre Marcho Pierj Succello

Fratre Zanobio Mattej

Fratre Sante Bardini

omnibus fratribus ecclesie Sci Marci de Florentia testibus ad infrascripta omnia et singula proprio hore infrascripti testatoris vocatis habitis et rogatis Cum nihil sit certius morte et nihil incertius eius hora hinc est Quod providus et discretus Vir Lucas olim Simonis Marci della Robbia scultor civis florentinus et de populo S. Laurentij de Florentia sanus mente sensu corpore visu et intellectu nolens intestatus decedere sed de suis bonis legitime providere suum quod dicitur nuncupatum testamentum sine scriptis procuravit et fecit seu condedit in hunc modo videlicet

In primis quidem animam suam Omnipotenti Deo Eiusque Gloriose Virgini Matri et toti Celestis Curie Paradisi humiliter et devote raccomandavit et sepulturam corporis sui elegit eo loco et cum illis funeris expensis prout videbitur intrascripto suo heredi

Item reliquit et legavit opere Scē Marie Floris de Florentia et nove constructioni murarum civitatis Florentie et nove fabrice dicte opere jnter omnes libras duas f.p.

Item jure legati Reliquit et legavit domine Checche eius nipote et filie olim Marci Simonis della Robbia vedue Flor. aur. centum quos solvi et dari voluit per infrascriptam primam heredem

Item dicens et asserens dictus testator qualiter ipse habet duos nipotes ex fratre videlicet Andream et Simonem fratres et filios olim Marci Simonis della Robbia eius nipotes ex fratri carnali et qualiter ipse Lucas tempore vite sue docuit artem suam sculpture dictum Andream et adeo quod ipse Andreas per se ut magister potest exercere artem dicti Luce et eidem Andree in¹ vita ipsius Luce reliquit omnem creditum dicti Luce et adeo quod ipse Andreas hodie mediante industria dicti Luce et eius documentis habet artem lucrativam adeo quod usque in hodiernum diem satis superlucratus est et hodie superlucratur et in futurum actus (having the meaning of *aptus*) est superlucrarij cum ipsa arte et eius exercitio et poterit facillime et honorifice se et familiam suam nutrire Et dictum Simonem nihil docuit in vita sua quia exercet aliam artem et considerans quod

¹The photographed text begins here.

omnia bona ipsius Luce non sunt sufficientia nec tante extimationis quante est industria dicti Andree quam ipse Andreas haberet mediante donatione dicti Luce idcirco volens ut dictus Simon habeat aliquid ex bonis dicti Luce et nec posset tam a dicto Simoni quam ab omnibus intelligentibus de ingratitudine reprehendi idcircho.^o

In omnibus suis bonis etc sibi heredem instituit dictum Simonem eius nipotem predictum Et hanc dixit etc cassans etc Rogans etc

Ego angelus olim cinozi Rogatus suprascripti

“In omnibus et singulis alijs suis bonis mobilibus et immobilibus juribus nominibus et actionibus presentibus et futuris sibi universalem heredem instituit fecit et essere voluit dictum Simonem olim Marcj Simonis della Robbia eius nipotem ex fratre carnali Et hanc suam dixit asservit essere et essere voluit suam ultimam voluntatem et ultimum testamentum quam valere voluit iuri testamenti et se iure testamenti non valeret valere voluit iure codicillarum et se iure codicillarum non valeret valere voluit iure donationis causa mortis vel alterius cuiuscumque ultime voluntatis qua et quibus magis melius efficacius valere poterit et tenerit.

Cassans irritans et annullans omnem et quodcumque aliud testamentum et ultimam voluntatem a se hinc Retro factum manu cuiusque notari vel alterius cuiuscumque persone licet in eo vel eis vel aliquo ipsarum essent apposita aliqua verba precisa derogatoria vel penalia de quibus dixit se ad presens non Ricordari et penitere et presens testamentum et ultimam voluntatem omnibus alijs prevalere.

Rogantes prefates testes Religiosos ut sint testes omnibus predictis et me notarium infrascriptum ut de predictis omnibus et singulis presentem confectum instrumentum

Ego angelus olim Cinozi notarius Rogatus suprascripti

(*Archiv. idem, Rogiti di Ser Agnolo di Cinozzo di Cino, Testamenti 1442-1489, segnato Notai C. 525 a c. 120 e 120^v*)

IV

Item postea dictis anno indictione et die xx^{mo} mensis Maij Actum Florentie in populo Sci Laurentij presentibus Petro Michaelis del giogante (?) et Benedicto vocato Cianfanina ministro Gabelle Contractum civitatis Florentie ambobus dicti populi Sci Laurentij de Florentia testibus etc

MCCCClxxxj Indictione XIIIJ

(In margine: Mandatum Luce Simonis della Robbia)

Lucas olim Simonis Marcj della Robbia civis Florentinus non Revocando etc omni modo etc fecit etc suum procuratorem etc Simonem eius nipotem ex fratre et filium olim Marcj Simonis della Robbia ibidem presentem etc specialiter et nominatim ad promutandum etc usque in quantitatem Florenorum septingintorum quinquaginta Montis Comunis comunitatis Florentie in totum semel et plures etc et illos ponendum ad computum etc et propterea dandum quancumque licentiam etc et generaliter etc dans etc promictens etc Rogans etc

[*Archiv. idem, Rogiti di Ser Agnolo di Cinozzo di Cino, 1475-1488, segnato Notai C. 525 c. 129^v e 130*]

V

Luca declines office of Consul of Guild of Masons and Woodcarvers.

1471, Aug. 4. "Lucas olim Simonis della Robbia, civis florent. extractus ut ipse asserit, in consulem artis magistrorum de florentia, dicens et asserens se esse et etate et infirmitate adeo gravatus, quod sine periculo sue persone dictum officium commodè exercere non posset etc. . . ."

[*Archivio Generale di Firenze, Rogiti di Ser Agnolo di Cinozzo*. Quoted by Cruttwell, pp. 305-306 from Gaye, I, pp. 185-186, note 1.]

VI

"Item postea dictis anno (MCCCClxxj) Indictione et die secundo mensis septembris Actum flor. in popolo Sci Laurentij de flor^a presentibus Petro antonij legnaiuolo popoli Sci Laurentij predicti et Guglielmo julianj filatoraio dicti popoli Sci Laur. testibus etc."

(In margin: Procura Luce della Robbia)

"Lucas olim simonis della Robbia civis flor. extractus ut ipse asservit in consulem artis Magistrorum de flor^a dicens et asserens se esse et etate et infirmitate adeo gravatus quod sine periculo sue persone dictum officium commodè exercere non posset omni modo etc fecit etc suum procuratorem etc Simonem Marcj della robbia eius nipotem ex fratre specialiter et nominatim ad Renuntiandum dictum officium consulatus et propterea quodlibet juramentum jn predictis necessarium prestandum etc etc et generaliter etc dans etc promictens etc Rogans etc."

[*Archivio dello Stato, Rogiti di Ser Agnolo di Cinozzo di Cino, 1463-1474, Segnato Notai C. 525 c. 304r*]

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ETRUSCAN SHELL-ANTEFIXES IN THE UNIVERSITY
MUSEUM, PHILADELPHIA

IN a previous article¹ I described a series of archaic antefixes from Cervetri, which are now on view in the University Museum in Philadelphia. These do not in any sense constitute the whole of the Museum's collection. It is the purpose of this paper to describe a very interesting series of later date from the same site. This will be followed in another paper by the publication of a collection of antefixes from Corneto and of antefixes and fragments from various sites, which cannot be grouped within the above classes.

These antefixes and fragments came into the possession of the Museum in the same manner, and under the same conditions as the archaic group already described. While isolated specimens from Cervetri have been published from time to time, no previous attempt has been made, so far as I am aware, to bring together the various known specimens, and assign them to types or groups.²

For various reasons, it is appropriate to begin with the examples from Cervetri. In the first place, they seem to antedate the other specimens; in the second, the description will then follow by a very natural transition that of the archaic specimens from the same site. It will be remembered that these antefixes are part of the finds of an illicit excavation carried on by and for dealers in the year 1869, and seem to be divided among five museums:—the British Museum, the Antiquarium at Berlin, the Glyptothek Ny-Carlsberg at Copenhagen, the Metropolitan Museum in New York, and the University Museum in Philadelphia. The specimens in the two last museums were acquired in 1896-7, by Professor A. L. Frothingham of Princeton University, who was then Acting Director of the newly established

¹ A.J.A. XXIV, 1920, pp. 27 ff.

² Since I wrote the above, it has been brought to my notice that an attempt to classify the Cervetri antefixes is made in Fenger, *Le Temple Etrusco-Latin*, p. 16, and figs. 54-59, which are taken from the figures in *Mon. dell' Inst., Suppl.*, to which I shall frequently refer in the course of this paper.

American School of Classical Studies at Rome,¹ and were divided by him into two parts, the larger of which came to Philadelphia.² There may be a few specimens from this site also in the Museo Artistico Industriale at Rome.³

Prior to the discovery of the Cervetri antefixes, the existence of such specimens with shells or canopies had been known, and several isolated examples had found their way into museums, and been published;⁴ but no group of so many specimens had been brought together.

The earliest shell-antefixes extant seem to be those from Civit  Lavinia in the British Museum. This statement is made with

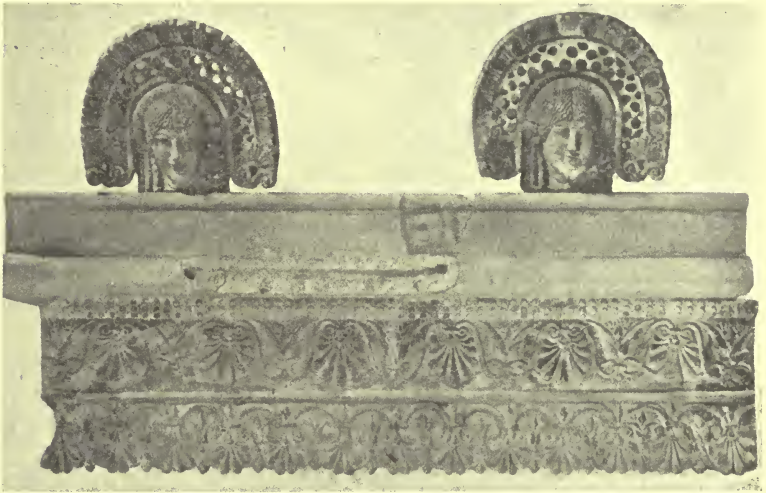


FIGURE 1.—ANTEFIXES FROM CIVIT  LAVINIA: BRITISH MUSEUM.

reservations, as there is doubtless much unpublished material of still earlier date in the Italian museums. It is, nevertheless, true that the specimens from Civit  Lavinia display all the mannerisms and conventionalities of archaic work (Fig. 1).⁵

¹ Now the School of Classical Studies of the American Academy in Rome.

² As far as is known, the objects to be described have not been published before.

³ See *Mon. dell' Inst., Suppl.* pls. II, 1, 2, 3, and III, 1, 2, 3, and Fenger, *op. cit.*

⁴ For example, Panofka, *Terracotten in Berlin*, pls. VII, X, XLV, and especially LII–LIII. This book was published in 1842.

⁵ British Museum, *Catalogue of Terr cottes*, B605, B606; Walters, *Hist. Ancient Pottery*, I, p. 101, and pl. III; Wiegand, *Glyptothek Ny-Carlsberg*, p. 17, fig. 4; Luce and Holland, *A.J.A.* XXII, 1918, p. 327, fig. 5.

The specimens from Cervetri with shell or canopy attachment may be readily divided into five classes, two of which are represented in the examples in New York and Philadelphia. These types fall into an earlier and a later period, the first two being in the former, the last three in the latter. With regard to the chronology, it would seem as if these antefixes should be placed at the end of the fifth and beginning of the fourth centuries B.C. It is the belief of Walters that the whole group belongs in the fifth century B.C.;¹ but the present tendency in Etruscan chronology would date them a century later. The evidence offered by the

few specimens of revetments found on this site² would also tend to throw the date of these antefixes well into the fourth century, if not later.

The five types may be again grouped into two general classes,—those with female heads in the centre, and those with the heads of satyrs. For convenience, these will hereafter be called “male” and “female” antefixes.

The earliest period is represented by Types I and II, Type I being female, Type II male. Only one specimen of Type I is



FIGURE 2.—ANTEFIX IN BERLIN:
TYPE I.

known to me. It is at present in the Antiquarium at Berlin, No. 6681, 3 (Fig. 2).³ This is a large antefix, 52 cm. high, with a maximum width of about 50 cm. The female head in the centre is treated in a strongly archaic manner, with slanting, almond-shaped eyes, a conventionalized head-dress, and a suggestion of

¹ British Museum, *Catalogue of Terracottas*, p. 175, in describing B621, an antefix of Type V, from Cervetri; Walters, *op. cit.*, II, pp. 315 f.; cf. pl. LIX for B621.

² Revetments from this site in Berlin have been published by Wiegand, *op. cit.*, figs. 12–29; Luce and Holland, *op. cit.*, fig. 1; and revetments from this site in Philadelphia and New York, by Luce and Holland, *op. cit.*, fig. 6, No. 2, and fig. 7.

³ Published by Wiegand, *op. cit.*, p. 29, fig. 43. Another specimen is published (perhaps it may be the same one), in *Mon. dell' Inst., Suppl.* pl. III, 2. The writer of the text accompanying this plate had not seen any examples of this type. See also Fenger, *op. cit.*, fig. 56.

the archaic smile. It should be noted that the ears are like those of a satyr. Around the head runs the large shell, or canopy, decorated with palmettes and lotus-flowers, ending on each side in a palmette, giving a total of five palmettes and four lotuses. All the palmettes are of seven petals. Between each palmette and the adjoining lotus a portion of the canopy is left open, so that we may call Type I a type with perforated shell. It will be observed that this principle is also employed in the antefixes from Civit  Lavinia. The canopy is held to the cover-tile by an arched buttress of solid terracotta, which is preserved. The antefix rests on a base, or plinth, which is decorated with a maeander pattern.

The disposition of colors is as follows:—the flesh is white; the hair and veil are black; the eyes, eyebrows, lips, ear-rings, and head-dress are light red; the drapery at the base is dark red; while the palmette-lotus pattern is treated in black, white, and dark red on a background of dark blue. It should be stated here that this dark blue is very close to black, and it is not unlikely that it was originally black and has faded or washed out into its present shade. I say this on the analogy of the specimens that I have myself studied.

Wiegand, in describing this piece, declares that it rested on a roof with a pitch of 1:8.

Type II, the male counterpart of Type I (Fig. 3), is represented by two specimens, one in Copenhagen, and one in Berlin, No. 6681, 5.¹ Like Type I, they have the openwork or perforated shell, and practically the same palmette-lotus pattern, of five seven-petal



FIGURE 3.—ANTEFIX IN COPENHAGEN: TYPE II.

¹ The Copenhagen example is published by Wiegand, *op. cit.*, pl. 176, 1a, and 1b and described on p. 29, No. IX. The one in Berlin is published and described, *ibid.* p. 29, and p. 30, fig. 44. See also *Mon. dell' Inst., Suppl.*, pls. II, 1, and III, 1. The writer of the text in *Mon. dell' Inst., Suppl.* declares that he has seen one example of this type. His pl. III, 1 represents a slight variant, which might be called Type IIa, which is otherwise unknown to me. See also Fenger, *op. cit.*, figs. 54 and 55.

palmettes, and four lotus-flowers. The shell is held to the cover-tile by a strong arched buttress of terracotta,¹ and the antefix rests on a base, or plinth, ornamented with a maeander pattern. This base differs from that of Type I, in that the maeander runs to the right, whereas in the former type it ran to the left.

The head in the centre is that of a heavily bearded Silenus, with erect, equine ears. The archaic nature of the type is proven by the conventional curls of the hair, the slanting eyes, the archaic smile, and the locks that fall in waves to the base in a manner suggesting the "Egyptianizing" head-dress of the earlier specimens.

Both specimens of Type II are of the same height (50.5 cm.) and of about the same estimated width, making them, therefore, very close to a perfect square. This is important, as we shall find this same ratio of height to width prevailing in all the types except Type III.

The disposition of colors on the two specimens is the same, and is as follows:—flesh, yellowish white; eyes white; pupils of eyes, lashes and eyebrows black; hair and moustache red, as also a patch on the face; rest of beard black; ears red on the outside, interior white. The background of the head is black, picked out with blue, while that of the palmette-lotus is black. This



FIGURE 4.—ANTEFIX IN BERLIN:
TYPE III.

ornament is principally white, with accessories of black and red, while the maeander is of black, white, and red also. These same colors were used on the maeander in Type I.

These two types represent the earlier shell antefixes from Cervetri of the group under discussion. The style is archaic rather than archaistic, and Wiegand and Fenger agree in their antedating the other types. The fact that so few specimens are known would also tend to show their earlier date.

With Type III, then, we come to the later period of these shell antefixes from Cervetri,

¹ Illustrated by Wiegand, *op. cit.*, pl. 176, 1b.

and find ourselves examining work of the fourth century B.C., while the earlier types may well be considered as belonging in the latter half of the fifth. In fact, Type III may well be the latest of all the groups, and shows in many ways a distinct advance in execution and conception. One specimen, in Berlin, No. 6681, without a complementary number, is known to me (Fig. 4);¹ while a specimen in the British Museum, No. B623, is also of this type² (Fig. 5), and should be classed with it.

The antefix in Berlin has a height of 52.5 cm., while that in the British Museum is registered at 15 $\frac{3}{4}$ inches or about 40 cm., but, in explanation of this discrepancy, it should be remembered that the canopy of the latter specimen is nearly all broken away.

The central head is that of a Satyr, heavily bearded, with a snub nose, erect, equine ears, and a long, drooping moustache, with curly ends. The hair is represented as thick and matted, and a fillet is worn around the head. On the plinth, instead of the maeander-pattern found on the other types, we find the paws of a panther-skin, tied around the Satyr's neck in a realistic manner. The shell



FIGURE 5.—ANTEFIX IN BRITISH MUSEUM: TYPE III.

is solid, and, in the case of the example in Berlin, is decorated with a palmette-lotus pattern. This pattern differs, however, from that of the preceding types, not only in being solid, but also in the shell ending on each side in a half lotus, giving a decoration of three palmettes, one in the centre and one on each side; two lotus flowers; and two half lotuses. The central palmette has seven petals; the other two, five each.

¹ Described and published by Wiegand, *op. cit.*, pp. 29, 30, and fig. 45. See also *Mon. dell' Inst., Suppl.* pl. II, 2. The writer of the accompanying text admits having seen one specimen of this type. See also Fenger, *op. cit.*, fig. 57.

² See British Museum, *Catalogue of Terracottas*, p. 175. I am greatly indebted to Mr. H. B. Walters, Keeper of Greek and Roman Antiquities in the British Museum, for kindly permitting me to publish this antefix.

On the specimen in Berlin, we find the flesh parts in red, the hair and beard black, the fillet buff, the pupils of the eyes brown, and the lashes and eyebrows black. The head in the British Museum has the same arrangement of colors, except that the pupils of the eyes are also black. The palmette-lotus pattern on the Berlin specimen is in red and white on a black background, while the specimen in London has red "tendrils"¹ on a dark blue background.

It is my opinion, as already stated, that this type is probably the latest of the five. The style is more naturalistic, and the



FIGURE 6.—ANTEFIX IN PHILADELPHIA: TYPE IV.

rendering of the paws of the skin on the base is an ingenious touch not to be found elsewhere. In the next type, therefore, it is my opinion that we revert to a slightly earlier group. I have made this arrangement with malice aforethought, however, in order to bring at the end of this part of the paper the description of the specimens existing in Philadelphia and New York.

Type IV, the next to be discussed, is, then, a little earlier than Type III. It is also a male type, of which Type V is the female counterpart. Four examples are known to me, all in American

¹ This is the term given by the *Catalogue*; the photograph shows that the design is the same as in the specimen in Berlin.

museums, two being in Philadelphia and two in New York. I have selected for illustration one of the specimens in Philadelphia, No. MS1804 (Fig. 6).¹

For various reasons it will be convenient to give a formal description of only one of the antefixes, namely, the one illustrated. A series of charts has, however, been prepared, covering the others. These charts give the dimensions, and comparative color schemes, and reveal various interesting facts, to which I shall allude later. But, before describing the particular specimen selected, it will be well to examine the things which all four have in common, and which make them a type, distinct from any other type.

The head, again, is of a Satyr. The beard is shorter, the face wider than in the types previously described. The ears are not so prominent, being smaller, and set more closely to the head, which is crowned with a wreath or fillet. The shell or canopy is solid, and has the same arrangement of palmettes and lotus-flowers that we saw in Type III. All four examples are largely restored, and put together from many fragments. The shell was originally held to the cover-tile by a solid buttress of terracotta, which is gone on all the specimens except one of those in New York.

MS1804, to come now to the particular specimen to be described, is a good example of the type. It has a height of 47.2 cm., and a maximum width of 49.3 cm. The dimensions of the head are: width from ear to ear, 20.3 cm., and height, from end of beard to top of head, 25.6 cm. As the centre palmette has been very largely restored, it should be said that the height is only approximate, as the restoration is doubtless somewhat short of the actual height.

The disposition of colors is as follows:—flesh parts are red; the beard and hair are black; the fillet or wreath was probably yellow, as there are traces of this color on the specimen at this point; the pupils of the eyes, lashes, and eyebrows are black; the irises of the eyes are white; the teeth, which show through the open mouth, are white; and the base is red and white. On the shell we find the background around the head (called on the chart

¹ See also *Mon. dell' Inst., Suppl.* pl. II, No. 3. The writer of the accompanying text declares that he has seen four examples of this type; as his text was published before the acquisition of these objects for the two American museums, these may be the ones to which he refers; or they may be in the Museo Artistico Industriale at Rome. See also Fenger, *op. cit.*, fig. 86.

"lower background") is red; the upper background, black; the palmette and lotus petals and spirals, white; the lotus buds, red; the base of the palmettes, white,¹ the sepal of the right lotus, blue, of the left, white.

Let us now glance at the charts that have been prepared for Type IV, taking up first that of comparative dimensions. The striking features here revealed are the impossibility of obtaining absolutely accurate "over all" measurements owing to the enormous amount of restoration, and the extraordinary way in which the measurements of the heads (the interior measurements) agree, there being only one exception to each measurement. To produce such agreement the quality of the clay must have been very uniform. In type V, we shall find a much greater discrepancy in the interior measurements.

COMPARATIVE MEASUREMENTS OF KNOWN SPECIMENS OF MALE ANTEFIXES FROM CERVETRI. TYPE IV

Example	Height	Width	Ear to Ear	Tip of Beard to Crown of Head
Philadelphia MS1804.....	47.2*	49.3	20.3	25.6
Philadelphia MS1805.....	47.7*	46.7†	19.9	25.6
New York GR1041.....	49.5*	49.7	19.9	25.6
New York GR1042.....	44.1	44.3†	19.9	25.1

All measurements are given in centimetres.

* Estimated; centre palmette restored.

† Estimated; a side palmette is restored.

Turning now to the color-scheme charts, for heads and canopies respectively, we find another interesting fact revealed; namely, that no two of the four antefixes are exactly alike in points of color. While the general colors employed remain the same, yet we find in small details that considerable latitude is permitted. The special points of difference are the wreath on the heads, and, on the canopies, the bases of the palmettes and the sepals of the lotuses. Besides these places, New York GR1042 differs from all the others in the irises of the eyes, and the lotus buds. The charts, however, will show all these things at a glance, much more briefly and convincingly than any amount of text.

¹ The left palmette has been restored, and the base, therefore, does not exist.

COLOR-SCHEME CHART—MALE ANTEFIXES FROM CERVETRI. TYPE IV
A. HEADS

Example	Flesh	Beard and Hair	Wreath	Pupils of Eyes, Eyebrows and Lashes	Irises of Eyes	Teeth	Base
Philadelphia MS1804 .	red	black	yellow	black	white	white	red and white
Philadelphia MS1805 .	red	black	blue	black	white	white	red and white
New York GR1041 ...	red	black	dark blue	black	white	white	†
New York GR1042 ...	red	black	dark blue	black	red	white	†

† All trace of color gone; much restored.

COLOR-SCHEME CHART—MALE ANTEFIXES FROM CERVETRI. TYPE IV
B. SHELLS OR CANOPIES

Example	Upper Back- ground	Lower Back- ground	Pal- mette Petals	Pal- mette Bases	Spirals	Lotus Petals	Lotus Buds	Lotus Sepals
Philadelphia MS1804	black	red	white	white	white	white	red	right, blue; left, white
Philadelphia MS1805	black	red	white	blue	white	white	red	blue
New York GR1041	black	red	white	white	white	white	red	white
New York GR1042	black	red	white	black	white	white	white	black

We now come to Type V, the female counterpart to Type IV. Of all five types, it is the commonest, and has been the most often published. Nine examples are known to me, of which three are in Philadelphia, two in the British Museum, two in Copenhagen, one in New York, and one in Berlin. There may also be some in the Museo Artistico Industriale in Rome.¹ One of the examples in Philadelphia has been selected for description as a representative of the type, while another of the Philadelphia

¹ See *Mon. dell' Inst., Suppl.* pl. III, 3. The writer of the text accompanying the plate declares that he has seen eight specimens of this type. See also Fenger, *op. cit.*, fig. 59.

specimens represents an abnormal disposition of colors and for that reason will also be described.

As in the case of Type IV, a series of comparative charts has been prepared to show the measurements and color-schemes of the different antefixes in comparison with each other. To this has also been added a chart of publications, which gives a fairly complete bibliography of each of the nine specimens, especially as regards illustrations.

Philadelphia MS1803, as far as the modelling and general disposition of colors is concerned, stands as a fairly good example



FIGURE 7.—ANTEFIX IN PHILADELPHIA: TYPE V.

of the type (Fig. 7) and has been selected for that reason. We see here a great advance in conception and execution over the previous female type, Type I, and over all of the male types, with the possible exception of Type III. Fenger,¹ indeed, would even go so far as to imply that this group belongs at a slightly later period than any of the others; but it does not seem to me that there is any evidence to prove this, and that the chances are that Type V, although undoubtedly of more pleasing workmanship, must be regarded as synchronous with Type IV, and possibly antedating Type III.

¹ *Op. cit.*, p. 16, where he speaks of this type as "têtes idéalisées de déesses."

The female head has here lost all traces of archaism. The eyes are set without the slant observed in Type I, the archaic smile is absent, and instead we see a rather thoughtful expression portrayed. The hair, too, is naturalistically rendered, being parted, waved, and then looped up in clusters over the ears. In the ears are enormous ear-rings, of a type fortunately not uncommon among extant specimens of Etruscan gold jewellery. Wiegand¹ refers in this connection to "la grande parure d'or du Museo Gregoriano," by which I presume he means the treasure from the Regulini-Galassi tomb, which, it will be remembered, is also from Cervetri.² The British Museum possesses a large collection of



FIGURE 8.—ETRUSCAN
EAR-RING: PHILADELPHIA.

ear-rings of this form,³ while the University Museum in Philadelphia acquired in 1895 a small gold ear-ring of this shape (No. MS310), also, by a singular coincidence, said to have come from Cervetri (Fig. 8).

On the head, a diadem or stephane is worn, decorated with rosettes. Drapery is rendered below the head, coming around the neck. Around the head runs the shell, or canopy, which is decorated with the same arrangement of palmettes and lotus-flowers found in Types III and IV. This is of three palmettes, two lotus-flowers, and two half lotuses. The central palmette has seven petals, the other two five each, while the two half lotuses form

the ends of the shell at right and left. This shell was held to the cover-tile by means of a heavy buttress of terracotta, which is preserved on the specimen selected for description (Fig. 9). In this specimen, too, most of the cover-tile is preserved, which gives a fairly good idea of its probable size and diameter, the inner diameter, as preserved, being about 15.5 cm., and the thickness

¹ *Op. cit.*, p. 28.

² For the most convenient description of this treasure, see Helbig, *Führer* (1912 ed.), I, pp. 391-400, especially p. 398, No. 729. I have been informed that Mr. C. Densmore Curtis of the American Academy in Rome is working on a new publication of the jewellery from this site, which, when it appears, will replace all previous descriptions.

³ Marshall, *Catalogue of Greek, Etruscan and Roman Jewellery in the British Museum*, Nos. 2252-2261, and pl. XLIV.

of the tile being a little over 2 cm. The antefix, as in Type IV, rests on a base, which is ornamented with a maeander pattern.

These are general details in which all the examples of the type agree. On this particular specimen, the flesh is rendered in white;

the hair, in yellowish brown; the lips, in red; the pupils of the eyes, eyebrows and lashes, in black; the ear-rings and diadem, in yellow; the drapery, in red; and the base, in red and white. The upper background of the canopy is black or dark blue; the lower background, red; and the whole palmette-lotus ornament, white.



FIGURE 9.—ANTEFIX IN PHILADELPHIA: SIDE VIEW.

The following parts of the antefix have been restored; a large fragment of the left palmette, including most of the spirals, half of the base, and the centre and right petals; the end of the left petal of the left lotus, and

practically the entire right petal; the three left petals and part of the left spiral of the centre palmette; and the centre and right petals of the right palmette. The rest of the antefix has been mended in many places. It has a height of 46.8 cm., and an estimated maximum width (estimated, merely, on account of the restorations on the side palmettes) of 49.6 cm. The face from ear-ring to ear-ring is 22.3 cm., from chin to crown of head 21.2 cm.

It will now be appropriate to study the charts that accompany this part of the paper, and cover the different specimens of Type V. The first chart, that of publications, will show that this type has been frequently published in the past, some of the examples being illustrated in more than one place. The second chart, that of comparative dimensions, gives what may be called the inner and outer measurements of each specimen, and places them in convenient relation one with another. It will be seen that there is not the same uniformity that prevailed in Type IV, as regards inner measurements, although, with one exception, that

of Philadelphia MS1826, they are approximately the same. The reason for the discrepancy in the Philadelphia specimen I believe to be due to the fact that it is of a more porous and less firm quality of clay, which would cause a greater shrinkage in the mould. There are various discrepancies also in the outer, or "over all" measurements, which may doubtless be due to the

CHART OF PUBLICATIONS—FEMALE ANTEFIXES FROM CERVETRI. TYPE V

Example	Publication
Philadelphia MS1802.....	Fig. 10 of this article.
Philadelphia MS1803.....	Fig. 7 of this article.
Philadelphia MS1826.....	Unpublished.
British Museum B621.....	<i>Catalogue of Terracottas</i> , p. 175. Walters, <i>Hist. Ancient Pottery</i> , II, pl. LIX. <i>Cat. Greek, Etruscan, and Roman Jewellery</i> in <i>British Museum</i> , p. 225, fig. 71.
British Museum B622.....	Unpublished.
Copenhagen VII, 1.....	Arndt-Wiegand, <i>Glyptothek Ny-Carlsberg</i> , p. 27, VII, 1, and pl. 176, 1.
Copenhagen VII, 2.....	Unpublished.
New York GR1040.....	Unpublished.
Berlin 6681.....	<i>Arch. Zeit.</i> 1871, pp. 1, 2, and pl. 41. Arndt-Wiegand, <i>l.c.</i> , p. 28, and p. 29, fig. 42.

See also *Mon. dell' Inst., Suppl.* pl. III, 3, and also Fenger, *Le Temple Etrusco-Latin*, p. 16, fig. 59.

COMPARATIVE MEASUREMENTS OF KNOWN SPECIMENS OF FEMALE ANTEFIXES FROM CERVETRI. TYPE V

Example	Height	Width	Ear-Ring to Ear-Ring	Chin to Crown of Head
Philadelphia MS1802.....	47.8	49	21.8	21.4
Philadelphia MS1803.....	46.8	49.6*	22.3	21.2
Philadelphia MS1826.....	†	†	19.8	19.5
British Museum B621.....	45.4	§	§	§
British Museum B622.....	48.5	§	§	§
Copenhagen VII, 1.....	47.5	49.5†	21.9†	21.4†
Copenhagen VII, 2.....	43	§	§	§
New York GR1040.....	49.5*	52.6*	22.2	22.3
Berlin 6681.....	49	50.5†	22.7†	22†

All measurements are given in centimetres.

* Estimated: palmettes restored, at centre or sides.

† Estimated: measured from photographs or drawings to scale.

‡ Fragmentary; no shell remains.

§ Measurement unobtainable owing to insufficient data given in published description.

same causes, or else, the measurements recorded may be merely estimated, owing to the presence of restorations making correct measurements impossible, or owing to the fact that the measurements were taken from photographs or drawings where a scale was supplied. There is not enough evidence in these various discrepancies in measurement, great though some of them may be, to warrant the assumption that more than one mould was used in the making of these specimens. It will be observed that the inner measurements, and, to a lesser extent, the outer as well, give a series of almost perfect squares.

We finally come to the two charts, which deal with the disposition of colors on the various examples, which have been called

COLOR-SCHEME CHART—FEMALE ANTEFIXES FROM CERVETRI. TYPE V
A. HEADS

Example	Flesh	Hair	Lips	Pupils of Eyes, Eye- brows and Lashes	Ear- Rings	Diadem	Drapery	Base
Philadelphia MS1802	black	red	red	red	red	red	red	red and white
Philadelphia MS1803	white	yellow brown	red	black	yellow	yellow	red	red and white
Philadelphia MS1826	white	red	*	*	*	*	red	*
British Mu- seum B621..	white and red	†	red	black	†	†	red	†
British Mu- seum B622..	white	*	*	*	*	*	red	*
Copenhagen VII, 1.....	white (?)	red	red	†	†	†	red	red
Copenhagen VII, 2.....	†	†	†	†	†	†	†	†
New York GR1040	white and red	yellow	red	pupils red, rest black	brown	yellow	red	red and white
Berlin 6681 ...	white	red	red	black	yellow/ brown	yellow brown	red	red, white and black

* All traces of paint have disappeared.

† Insufficient data given in description make it impossible to assign the proper colors.

COLOR-SCHEME CHART—FEMALE ANTEFIXES FROM CERVETRI. TYPE V
B. SHELLS OR CANOPIES

Example	Upper Back-ground	Lower Back-ground	Pal-mette Petals	Pal-mette Bases	Spirals	Lotus Petals	Lotus Buds	Lotus Sepals
Philadelphia MS1802 . . .	red	red	black	red	black	black	white	red
Philadelphia MS1803 . . .	black or dark blue	red	white	white	white	white	white	white
Philadelphia MS1826 . . .	*	*	*	*	*	*	*	*
British Museum B621..	dark blue or black	red (?)	white	green	white	white	white	green
British Museum B622..	dark blue or black	*	*	green	*	*	*	green
Copenhagen VII, 1.	†	†	white	blue	white	white	†	blue
Copenhagen VII, 2.	†	†	†	†	†	†	†	†
New York GR1040 . . .	black or dark blue	red	white	black	white	white	red	black
Berlin 6681 . . .	black or dark blue	red	white	grey green	white	white	red	grey green

* Shell nearly all gone, or else no traces of paint remaining.

† Impossible to assign proper colors, owing to insufficient data given in description of object.

"color-scheme charts;" and I submit that, in handling such a comparatively large number of objects, the chart method is more graphic by far than text would be. It compresses into a few pages information which, if written out, would cover two or three times the amount of space. Moreover it presents the information in a manner which enables the student to see at a glance the comparison between the different objects, and draw his own conclusions therefrom.

It will be seen from looking at the color-scheme charts, that in minor details of color, no two of the specimens can be said to be absolutely alike, with the possible exception of the two in the British Museum. The differences, however, are for the most part in minor details only, such as the bases of the palmettes, and the sepals of the lotus-flowers, and the general disposition of

colors remains the same in all of them, as is the case in Type IV. But there is one exception to this; one example, the disposition of colors on which is so abnormal, and so much the antithesis of the others, that it deserves a special description. Like the one already described as characteristic of the type, this, too, is in



FIGURE 10.—ANTEFIX WITH ABNORMAL COLORING: PHILADELPHIA.

Philadelphia, and bears the number MS1802 (Fig. 10). It has a height of 47.8 cm., and a maximum width of 49 cm., with interior measurements of 21.8 and 21.4 cm., respectively, as the chart of comparative dimensions shows. It will be seen that the interior and exterior measurements point here, too, to a series of perfect squares. It is also important on account of the small amount of restoration that was needed, the only places restored being

a small part of the left half lotus at the end, part of the left full lotus, and part of the central palmette. The back cover-tile has been restored, but a number of fragments of tile, which are said to belong to this antefix, and which join to each other perfectly, have been found, and are part of the University Museum's collection. An attempt to join them to the antefix, to see whether they truly belong to it, has not as yet been made, owing to the restoration in plaster of a cover-tile. The buttress, which connected the shell with the tile, has also been lost, but has not been restored.

It is, however, in the color-scheme employed that the importance of this antefix rests. The flesh is rendered in black, instead of the normal white; the eyes and lashes, red, instead of the usual black; the ear-rings and diadem in red, instead of the usual yellow or brown. As regards the shell or canopy, the whole background is red. In every other specimen, it is divided into an upper and a lower background, the former being black or dark blue, the latter, red. The palmette and lotus petals and the spirals are black. In every other specimen where a description is given, they are white. The bases of the palmettes and sepals of the lotus-

flowers are red. This is the place where experience shows the greatest divergence in color among the different antefixes of this type; but no other antefix described has this color. The lotus buds are white, and this is found in several other specimens. Other parts not mentioned agree in color with the general run of the specimens. But it will be seen that this antefix is the direct antithesis of the rest of the group as far as its general employment of colors is concerned, and is, therefore, worthy of a special description.

In conclusion, I should like to say a word regarding the relation which these antefixes bear towards the newly rediscovered Law of Dynamic Symmetry. I do not pretend to be an expert in applying the doctrine of whirling squares, and root-five rectangles, although I believe that the law exists, and that an archaeologist cannot afford to neglect it. It is the contention of its chief protagonist, Mr. Jay Hambidge, that it does not apply to Etruscan art; that their symmetry was static, rather than dynamic. All kinds of measurements were taken in an attempt to prove that for these antefixes dynamic symmetry was employed. My measurements do not appear to prove this, but point rather to the conclusion that Mr. Hambidge is correct, and that they were constructed along lines of static symmetry.¹

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¹ I wish here to acknowledge my obligations to the following persons: to my chief, Dr. G. B. Gordon, for permission to publish these antefixes, and for many facilities freely granted me; to my very good friend, and collaborator, Mr. Leicester B. Holland, for many suggestions and much help; to Mr. H. B. Walters, of the British Museum, for the photograph of the antefix B623, and for permission to publish the same; to Mr. Edward Robinson and Miss Gisela M. A. Richter, of the Metropolitan Museum in New York, for assistance cheerfully and ungrudgingly given, and many courtesies too numerous for me to enumerate; and to Professor George H. Chase of Harvard University for giving me access to valuable books in the Harvard Library that I could not obtain elsewhere.

ARCHAEOLOGICAL DISCUSSIONS¹

SUMMARIES OF ORIGINAL ARTICLES CHIEFLY IN CURRENT PUBLICATIONS

WILLIAM N. BATES, *Editor*

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GENERAL AND MISCELLANEOUS

The Bronze Age of Northern Europe.—At the November (1915) meeting of the Berlin Archaeological Society, Herr Kiekebusch spoke, with illustrations and with references to his own and other publications, on the relics of the Bronze Age of the March of Brandenburg which are in the Märkisches Museum at Berlin. Like the collections in Stockholm, Copenhagen and elsewhere, these remains show a northern prehistoric heroic age of a splendor rivaling that of the Mycenaean period in the south, and having certain points of contact with it. Of especial interest is the fact that, like Dr. Schliemann in his discoveries at Troy, Mycenae and Tiryns, the searchers here were in many cases guided to important finds solely by legend and oral tradition. (*Arch. Anz.* 1915, cols. 270-274.)

Pre-Roman Monuments of the Balearic Islands.—In *Sitzb. Mün. Akad.* 1914, 6, pp. 1-68 (13 pls.; 14 figs.), ALBERT MAYR describes monuments of pre-Roman times on the islands of Mallorca and Menorca. The buildings described are chiefly towers (round or square) of the type called Talayot, and walls of semi-oval plan (*Naus* or *Navetas*). Small objects are of flint and other stone, belonging to the stone age, of metal (chiefly bronze, including weapons, bracelets, rings, votive animals, etc.), and of terracotta (chiefly common pottery). Of the buildings the earliest seem to be the round talayots of Mallorca. The talayots seem to have been built as fortified habitations and places of refuge. The oval walls are remains of tombs and of dwellings. Subterranean and partially subterranean dwellings show that the early inhabitants were troglodytes. The chronology of the monuments of these islands is uncertain.

Explorations in Montenegro and Albania.—In 1916, when Austrian troops were in possession of the land, C. PRASCHNIKER and A. SCHÖBER made two archaeological journeys in Montenegro and Albania. Starting from Cetinje, where they found the small collection of antiquities from Doclea almost de-

¹ Beginning with Volume XXV the departments of Archaeological News and Discussions and of Bibliography of Archaeological Books will be conducted by Professor SIDNEY N. DEANE, Editor-in-charge, assisted by Professor C. N. BROWN, Miss MARY H. BUCKINGHAM, Dr. T. A. BUENGER, Professor HAROLD N. FOWLER, Professor HAROLD R. HASTINGS, Professor ELMER T. MERRILL, Professor LEWIS B. PATON, Professor A. S. PEASE, Professor S. B. PLATNER, Professor JOHN C. ROLFE, Dr. JOHN SHAPLEY, Professor ARTHUR L. WHEELER and the Editors.

No attempt is made to include in this number of the JOURNAL material published after June 30, 1920.

For an explanation of the abbreviations, see pp. 118-119.

stroyed, they visited the following sites which they describe: Doclea, Medun (Illyrian Meteon), Skutari (with description of the antiquities in the Jesuit college there), the castle of Vigu, Leš (Alessio or Lissos) where the powerful town walls are imposing, Acrolissos which they located on a height to the south-east of Lissos and overlooking its acropolis, Kruja, Zgorzež, Pertreja and Durazzo where a much injured relief of Pan with three nymphs, a centaur relief, and one with the figure of a winged Victory writing on a shield were noted built into walls. A small male head, two reliefs representing charging warriors and several inscriptions were removed by Servians to Belgrad. Other sites visited were the Byzantine ruins of Porthes, the castle and piers of the ancient bridge at Elbassan, also the Monastery of Saint John Vladimir with its antiquities, Berat, Fjeri, Pojani (Apollonia) where reliefs and inscriptions were noted, Marglić, Ardenica, Libovca, Divjaka, Kavaja, and Preza. On their second journey they examined Dulcigno (Olcinium), Pezana (Bassanica), Laçi, Gaitani, Kodra Maršenjt, Kalaja Samoborit, Vuksanlekaj, Šabanovići, Cembrücke, Tresanical, Kolovoz and Nikšić. Most of the sites still preserved portions of their ancient walls and in a few places there were pieces of Roman roads and occasional milestones. No important antiquities are reported. [*Archäologische Forschungen in Albanien und Montenegro*. VON C. PRASCHNIKER UND A. SCHÖBER. (Akademie der Wissenschaften in Wien, *Schriften der Balkankommission*, Heft VIII.) Wien, 1919, Hölder. 104 pp.; 117 figs.; map. 4 to.]

Ancient Decorative Wall-Painting.—A summary of the material for the study of the art of wall-painting in the Graeco-Roman world, with an outline of the different styles and their relations, is given by M. ROSTOVITZ in *J.H.S.* XXXIX, 1919, pp. 144-163 (4 pls.; 3 figs.). Although best known at Pompeii because of A. Mau's exhaustive study and publication, the existing or recorded remains of paintings, many of them not yet published, in houses, vaults, tombs, and temples, together with the related mosaics and painted stelae and vases, cover a period from the seventh century B.C. to mediaeval times, and a territory from Palmyra, South Russia and Egypt, to Gaul, Britain and Belgium. The structural division of the wall surface into horizontal sections, corresponding originally to stone base and brick upper wall with connecting member and with cornice, was the basis of all Greek decoration. The added vertical architectural features of columns, panels, etc., were characteristically Italian and western. The use of marble incrustation, first known in the palace of Mausolus in Caria, and the later floral styles, both naturalistic and conventionalized, were all of oriental origin.

The Painting of Ogmius.—The painting of the Gallic divinity Ogmius described by Lucian in the *Hercules* is discussed by FRIEDRICH KOEPP, *Bonn. Jb.* 125, 1919, pp. 38-73. He concludes that there was a god Ogmius though there is no other mention or representation of him known to us; that there is no evidence of the identification of a Gallic god of eloquence with Hercules; that Lucian's painting, if it ever existed, was, therefore, probably an allegory such as the Calumny of Apelles; that the fantastic allegorical treatment agrees well with what is known of Gallic art; that the execution was probably as dependent on the Graeco-Roman tradition as the rest of the art of Gaul.

Strollers in Antiquity.—In *Sitzb. Mün. Akad.* 1918, 6, pp. 1-53, HUGO BLÜMNER enumerates, with references to ancient writers and works of art, the various kinds of strolling folk who plied their trades in ancient times. They

were rhapsodes, musicians, tumblers, actors, mimes, pantomimes, story-tellers, strong men, acrobats, rope-dancers, gymnasts of all kinds, stilt-walkers, men who walked up walls, fancy riders, jugglers, slight-of-hand performers, fire-eaters, sword-swallowers, snake-charmers, animal trainers, persons who managed puppet theatres, imitators of birds and animals, soothsayers, magic healers, charlatans, and begging priests.

The Ancient Stage.—The ancient stage was the subject of an address by A. FRICKENHAUS delivered for the Winckelmann bi-centennial in Bonn before the "Verein von Altertumsfreunden im Rheinlande." It is printed in *Bonn. Jb.* 125, 1919, pp. 193-210 (pl.). The author endeavors to visualize the theatre and a number of typical plays.

Miscellaneous Ivories.—In *B. Metr. Mus.* XV, 1920, pp. 12-17 (3 figs.) J. B. gives a general account of the ivories in the Metropolitan Museum which antedate the Gothic period. He classifies them as Egyptian, late classical, east Christian, i.e. Syrian and Egyptian, Byzantine, Carolingian, Romanesque and Musulman.

Ancient Helmets.—In *Mus. J.* XI, 1920, pp. 68-76 (7 figs.) S. B. L(UCE) publishes six ancient helmets long in the Museum of the University of Pennsylvania. They are, a helmet with a high triangular crest from Narce; two Corinthian helmets, one earlier and one later; an Etruscan helmet with cheek pieces; and two round Roman helmets.

Queen Dynamis of Bosphorus.—A bronze bust found in 1898 near Novorossijsk, on the north shore of the Black Sea, serves as the basis of an article on the history of the kingdom of Bosphorus from the death of Mithradates the Great to the time of Caligula. The bust represents an elderly woman of character and dignity, with a coiffure of the time of Livia and the Agrippinas, and wearing as head-dress the upright tiara of the Persian kings bound with a diadem and covered with rosettes and eight-rayed suns, indicating a queen-priestess. It is undoubtedly a portrait of Dynamis, daughter of Pharnaces and granddaughter of Mithradates, who ruled over the kingdom of Bosphorus, alone and jointly with several husbands, during a large part of the reign of Augustus. The names and characteristics of different members of the dynasty, with their mixed Achaemenid, Thracian and Sarmatian affinities, are to be traced through coins, and in rather scanty literary references. (M. ROSTOV-TZEFF, *J.H.S.* XXXIX, 1919, pp. 88-109; 2 pls.; fig.)

Early Chinese Sculpture.—In *Sitzb. Mün. Akad.* 1915, 6, pp. 1-62 (22 figs.) L. SCHERMAN publishes twenty-one examples of early Chinese plastic art. Twelve of these are of clay (two tiles, a dog, a hen, four human figures, four heads) sent by the American missionary Th. Torrance. These come from western Ssüch'uan and may all be dated between 100 B.C. and 600 A.D., probably all considerably earlier than the last-mentioned date. There are noticeable differences of style, which may be due to difference of race, or of date, or both. The other objects published are of stone (one Japanese Bodhisattva, probably Kwannon, is of wood and is assigned to the seventh or eighth century), and all are Buddhistic. The dates proposed are from the early part of the sixth century to the eighth. One interesting relief group of Buddha Prabhutaratna and Sakyamuni has an inscription giving the date of dedication as February 14, 546 A.D. The publication of these monuments is accompanied by valuable bibliographical references.

EGYPT

The Reliefs of the Sun-Temple of Rathures.—In *Sitzb. Mün. Akad.* 1914, 9, pp. 1–18, F. W. VON BISSING discusses the reliefs of the sun-temple of Rathures at Abu Gurāb, near Memphis. These reliefs represent the ceremonies of the foundation of the temple, and are the only such representation extant belonging to the Old Kingdom. Here the ceremony of cleansing the temple before it is handed over to the god is replaced by the festival of Sed (*die Sedfeier*). The description and interpretation of this festival here given agree with the words of Rameses III in the Harris papyrus, pls. 49 f.

The Monotheism of Ikhnaton.—In the *Journal of the Society of Oriental Research*, III, 1919, pp. 70–80 S. A. B. MERCER discusses the question as to whether or not Ikhnaton was a monotheist. He concludes that he was not a monotheist but a henotheist.

The Morals of the Middle Kingdom.—In the *Journal of the Society of Oriental Research*, III, 1919, pp. 1–14, S. A. B. MERCER discusses the morals of the Middle Kingdom of Egypt.

The Cult of Dionysus in Egypt.—In *C. R. Acad. Insc.* 1909, pp. 237–243 P. ROUSSEL discusses a papyrus document published in *Ber. Kunsts.* XXXVIII, cols. 189–197 showing that Ptolemy Philopator instituted an official cult of Dionysus in Egypt.

BABYLONIA, ASSYRIA AND PERSIA

A Lament to Aruru.—In the *Journal of the Society of Oriental Research*, III, 1919, pp. 14–18 (2 pls.) JOHN A. MAYNARD publishes with translation Babylonian tablet No. 112 in the Metropolitan Museum of New York upon which is written a lament to Aruru. She is addressed as a goddess of war, of agriculture and of fertility.

Sumerian Liturgies and Psalms.—PROFESSOR LANGDON has published as the fourth part of the tenth volume of the Babylonian Section of the Museum of the University of Pennsylvania *Sumerian Liturgies and Psalms*. In an introduction he discusses the religious texts found at Nippur and now in Philadelphia and Constantinople, emphasizing the importance of the epic compositions and the liturgical texts. The tablets in this book include a lamentation of Ishme-Dagan over Nippur, a liturgy of the cult of Ishme-Dagan, a liturgical hymn to Innini, a psalm to Enlil, a lamentation on the pillage of Lagash by the Elamites, a lamentation to Innini on the sorrows of Erech, a liturgical hymn to Sin, a lamentation on the destruction of Ur, liturgical hymns of the Tammuz cult, a liturgy to Enlil, an early form of the series *d. Babbar-Gim-è-ta*, a liturgy of the cult of Kesh, the third tablet of the series *"The Exalted One who Walketh,"* and a Cassite tablet in four columns explaining Babylonian cult symbols. A note at the end of the last tablet states that "It is the property of the temple Esumera." [*Sumerian Liturgies and Psalms*. By STEPHEN LANGDON. (*Publications of the Babylonian Section of the Museum of the University of Pennsylvania*, Vol. X, No. 4.) Philadelphia, 1919, University Museum. Pp. 231–353; pls. LXXI–CV. 4to.]

Lists of Sumerian Personal Names from Nippur.—In the third part of Volume XI of the *Publications of the Babylonian Section of the Museum of the*

University of Pennsylvania EDWARD CHIERA completes his study of the personal names in the Temple School of Nippur. In his introduction he discusses new contributions to the field, Akkadian and Sumerian names, names from literature, the character of the texts, the grouping of the names and similar documents. Translations and transliterations of names are added as well as an index and thirty-four autograph plates illustrating seventy-eight tablets. [*Lists of Personal Names from the Temple School of Nippur. Lists of Sumerian Personal Names.* By EDWARD CHIERA. (*Publications of the Babylonian Section of the Museum of the University of Pennsylvania*, Vol. XI, No. 3.) Philadelphia, 1919, University Museum. Pp. 179-279; pls. LXXI-CIV.]

Contributions to Babylonian Lexicography.—In the *Journal of the Society of Oriental Research*, III, 1919, pp. 36-41; 81-85 S. LANGDON discusses and explains nine obscure phrases found in Sumerian inscriptions.

A Babylonian Grammatical School Text.—In the *Journal of the Society of Oriental Research*, III, 1919, pp. 65-69 J. A. MAYNARD discusses tablets numbered 197 and 198 of the Hoffmann collection. They are duplicates and preserve a school text. No. 200 is a missing part of No. 198.

Origin and Relations of Certain Assyro-Chaldaean Weights.—In *J. Int. Arch. Num.* XIX, 1918-1919, pp. 263-272 (2 figs.) MICHAEL C. SOUTZO propounds the theory that ancient systems of weights begin with the grain—originally the real grain of wheat, barley, or the like (see *A.J.A.* XXIV, 1920, p. 174). The differences between the various systems may be accounted for by assuming the use of a different kind of grain and also, perhaps, of different multiples of the grain chosen. Roman weights give the following table (in grammes):—grain (of wheat) = 0.047019 gr.

24 grains = 1 scruple = 1.128456 gr.

576 grains = 24 scruples = 1 ounce = 27.0830 gr.

6912 grains = 288 scruples = 12 ounces = 1 pound = 325 gr.

The Babylonian or Assyro-Chaldaean series comprises a shekel of 180 grains, a mina of 60 shekels (10,800 grains), a talent of 60 minas (3600 shekels = 648,000 grains). The grain of this series is shown to be identical with that of the Roman series. The heavy talent of Antioch was equal to 375 Roman pounds (= 2,592,000 Chaldaean grains); the Babylonian talent of 3,600 darics contained $3,600 \times 180 = 648,000$ grains; the talent of Nineveh, double the Babylonian, contained 1,296,000 grains, and the talent of Susa, double that of Nineveh, contained 2,592,000 grains, *i.e.*, was identical with the heavy talent of Antioch. The Hebrew talent of 125 Roman pounds is identical with the double Median (Persian) talent of 864,000 grains.

The Royal and the Standard Cubit in Herodotus.—In describing the fortifications of Babylon, Herodotus says (I, 178) that the wall was fifty royal ells (or cubits) thick and two hundred ells high, and he adds that the royal or king's ell (*βασιλικὸς πῆχυς*) was three fingers longer than the standard (*μέτριος*) ell. A similar distinction is made by the scholiast on Lucian *Cataplous*, 16). The royal ell is mentioned in Assyrian and Babylonian texts of the seventh century and in a private document of the Persian empire, of about 500 B.C. The Babylonian cubit, originally of 30 inches or finger-widths, was in these times of 24 fingers, and a foot of 16 fingers was used; hence the ratio was the same as in the Greek foot and cubit, 2:3. The exact lengths have been variously estimated, but it is probable that the square bricks and tiles found in build-

ings made by Nebuchadnezzar II, which have sides in this ratio, are the actual Babylonian square cubit and square foot of his time. They measure 333 mm. and 499 mm., which are also the values given to the Attic foot and cubit by Dörpfeld in his later calculation. Hence it seems probable that the Attic-Aeginetan metric system was the same as the Babylonian and used the king's ell, and that the cubit of 444 mm., corresponding to the smaller Greek foot of 296 mm., was the standard or μέτρος cubit of Herodotus. (F. H. WEISSBACH, *Arch. Anz.* 1915. cols. 149-166.)

Marsyas a Deified Ass.—In *R. Ét. Anc.* XXI, 1919, pp. 237-248 S. SCHIFFRÉ argues that the word *Imer(i)su* found in certain Assyrian inscriptions is the name of a divinity to whom the ass was sacred; that this divinity was in reality a deified ass, and that he is to be identified with Marsyas. His original home was Syria, not Phrygia. The writer cites such evidence as the story of Samson in *Judges* 15: 15-19 to support his identification. He argues further that the people of Muski with their king Mita (*i.e.* Midas) mentioned in the annals of Sargon II were Phrygians.

Belshazzar and Darius the Mede.—In *C. R. Acad. Insc.* 1919, pp. 184-203 Lieutenant Colonel DIEULAFOY points out that the time between the capture of Jerusalem (598/7 or 587/6 B.C.) and the edict of Cyrus freeing the Jews in 538, *i.e.* the year after his capture of Babylon, was either 60 or 49 years, not 70 as stated in *II Chron.* 36: 21. Seventy was, however, used because it was a sacred number. The capture of Babylon referred to in *Daniel* V occurred in 521 B.C. The ruler at that time was Nadintarbel of the inscriptions, who called himself son of Nabouhanid. He was either the brother of Belshazzar, or Belshazzar himself, and had assumed the name of Nabouchodonoser. His conqueror was Darius Hystaspes, *i.e.* Darius the Mede.

Notes on the Coinage of the Persian Empire.—In *J.H.S.* XXXIX, 1919, pp. 116-129 (pl.; fig.), G. F. HILL summarizes, with comments of his own what is known or conjectured about Persian coins in the ten reigns from Darius I, son of Hystaspes, to Darius III Codomannus (512-330 B.C.). The gold and silver coins, known to the Greeks as darics and sigloi (shekels), were reckoned in the ratio 20: 1, like English sovereigns and shillings, but various duodecimal fractions of both denominations were also made. Although certain series can be distinguished, according to the mode of portraying the Great King, it is extremely difficult to classify individual specimens and to assign them to definite reigns. A hoard of 300 darics found in the Athos canal of Xerxes with 100 early Attic tetradrachms cannot well be later than 480 B.C., but such basic points for dating are few. The coins showing the figure of the king with no indication of a waist line seem to belong to the earlier reigns, before Cyrus the Younger, and a beardless king may be Cyrus himself. A lion on the reverse of one coin may indicate the mint at Sardes. Many of the coins have punch marks made by local bankers and many are cut or stabbed to test their genuineness. Their average technical and artistic standard is not high.

SYRIA AND PALESTINE

A Bibliography to the Archaeology of the Old Testament.—In the *Journal of the Society of Oriental Research*, III, 1919, pp. 19-35, S. A. B. MERCER pub-

lishes a bibliography to the archaeology of the Old Testament 1914-1917 with very brief notice of the articles and books mentioned.

Monuments of Palestine in the Time of Jesus.—Under the title *Denkmäler Palästinas aus der Zeit Jesus* (*Das Land der Bibel*, Bd. II, Heft 1. Leipzig, 1916, Hinrich. 39 pp.) Dr. PETER THOMSEN gives a general sketch of the monuments in Palestine which Jesus might have seen, and probably did see. He includes aqueducts, roads, harbors, citadels, temples, theatres, buildings in Jerusalem erected by Herod, especially the temple, cemeteries, sculpture, inscriptions and coins.

Inscriptions of Sinai.—About ten inscriptions from Sinai, written in an unknown alphabet, are discussed by R. EISLER in a monograph, *Die Kenitischen Weihinschriften im Bergbauggebiet der Sinaihalbinsel* (Freiburg i. B., 1919). The writing is found to be Semitic, influenced by the hieroglyphic; the language a Canaanite dialect; the date that of the Hyksos; the place the site of a Semitic sanctuary. (S. R., *R. Arch.*, fifth series, X, 1919, p. 380.)

Coinage of Antiochus IX of Syria.—C. OMAN supplements his paper of some three years ago on the coinage of Antiochus Grypus by another on the chronology of the coins of his half-brother, called Philopator, or more commonly Cyzicenus, relating them carefully to the history of the king's reign. (*Num. Chron.* 1919, pp. 201-216; 2 pls.)

ASIA MINOR

The Hittite Language.—In *C. R. Acad. Insc.* 1919, pp. 203-206 J. LOTH calls attention to a recent book on the Hittite language by Carl J. S. Marstrand, Professor of Celtic at Christiania, entitled *Caractère indo-européen de la langue hittite* (1919). The conclusion reached is that it belongs to the western group of Indo-European languages with Germanic, Italo-Celtic and Greek, but is especially closely connected with Italic, Celtic and Tokharian. It is, however, an entirely independent language. The Hittite verb is especially enlightening.

Lydian Inscriptions.—Under the title 'Zu den lydischen Inschriften' (*Skrifter utgifna af Kungl. Humanistiska Vetenskaps-Samfundet i Uppsala*. XX. Uppsala, 1919, Akademiska Bokhandeln. 43 pp.) O. A. DANIELSSON discusses Littmann's *Lydian Inscriptions*, Part 1. He gives a sketch of the grammar as far as it can be made out, calls attention to certain words such as the demonstrative pronoun *es*, or *es-s*, or *est*; the relative and indefinite *hi-s* with which he compares the Hittite *kis*; the enclitic particle *-k* = *and*, etc. He praises Littmann's treatment of the alphabet, which has no *p* and is most like the Lycian; but he disagrees with him on certain points. Thus the character which looks like Ψ he would represent by *L*, not by *ũ*. He cites a case where it stands for the Greek λ . He would, therefore, write *halmu*, which he thinks means "king." He compares the Greek $\pi\acute{\alpha}\lambda\mu\upsilon\varsigma$, from Hipponax. For the change from *h* to *p* he cites *hldāns* = *Apollo*, in the phrase *hldāns artemuk* = *Apollo and Artemis*. The word *dāc* he interprets as "great." Thus *aliksāntrul dāc* = *Alexander the Great*. He thinks the Lydian inscriptions show few resemblances to the Etruscan. The latter language cannot have been derived from the former, though it may be related to it. If the Etruscans went from Asia

Minor to Italy in the eleventh century B.C., as he is inclined to believe, their language and the Lydian may have shown closer resemblances at that time.

Coinage of Chios.—J. MAVROGORDATO adds some notes to his series of articles on the coinage of Chios, basing them on some material that has recently come into his hands. The magistrate's name ΠΥΘΙΟΞ he now reads as ΠΥΘΙΩΝ. A new name, Nikomedes, appears on a coin from the Ready sale, and another case of the name Xenodotos is noted, together with two specimens of the rare overstruck coins, all from the same sale. (*Num. Chron.* 1919, pp. 217-220.)

GREECE

ARCHITECTURE

The Metroon by the Ilissus and its Frieze.—The whole of *J. Int. Arch. Num.* XVIII, 1916-1917 (160 pp.; 6 pls.; 68 figs.) consists of a monograph by J. N. SVORONOS on the Metroon by the Ilissus and its frieze. The Metroon is the Ionic Temple (Stuart and Revett, *Antiquities of Athens*, I, pl. 2, 1). The frieze is reconstructed from five slabs previously known, to one of which a small fragment in Athens is added (Cf. Studniczka, *Friesplatten vom Ionischen Tempel am Ilissos, in Athen, Berlin, und Wien nachgewiesen, zum Winckelmannsfeste des archaeologischen Seminars der Universität Leipzig am 5 December, 1910*; Watzinger, *Arch. Anz.* p. 37, No. 29, in *Jb. Arch. I.* XVIII). A relief from the basis of Nigrinus at Eleusis (Staës, *Arch. Δελτ.* 1917, Suppl. p. 77, fig. 1) is accepted as a copy of a lost slab. So the eastern frieze represented (1) Cimon and the victors at the Eurymedon before the gods and heroes of Agra; (2) a series of gods and heroes (Eurymedon Στεφανηφόρος, Alkon, Amynus, Heracles, Hephaestus, Zeus Hymettius, Demeter Achea, Hecate, Agra, Iacchus, Nike, Athena, Cora, Pluto; (3) the offspring of the Athenian women at Lemnos. On the sides only one slab at each end (cf. the "Theseum") was adorned with a relief. That at the east end of the south side represented Athenian maidens seized by Pelasgians of Hymettus near the spring of Callirrhoe, and corresponding to this on the north side was the rape of Attic women at Brauron by Pelasgians of Lemnos. The reconstruction of the western frieze and the two adjoining slabs is supported by no extant fragments. The representations proposed are (1) the acquisition of Lemnos by Miltiades, (2) Miltiades and his associates in that acquisition appearing before the wind-gods of Agra, (3) those wind-gods, (4) gods of Delphi, (5) Miltiades, son of Cypselus, with deities and nymphs connected with his family, (6) the acquisition of the Thracian Chersonesus by Miltiades, son of Cypselus. The temple was erected by Cimon shortly after his victory at the Eurymedon (462 B.C.), and the frieze was probably the work of Alcamenes.

Callirrhoe was the first Enneacrunus, and later both names were transferred to the fountain constructed under Pisistratus. The triangular precinct called by Dörpfeld the precinct of Dionysus ἐν Αἰμναῖς was originally sacred to Pluto Zagreus. The springs at Kaisariane, their sacred properties, and the deities with whom they were connected, are discussed. The Phlyakes are identified with the Γεφυραῖοι and connected with the story of Pluto and Persephone. The Ἡρώς Στεφανηφόρος is found to be Eurymedon, who, with Alkon

makes up a pair of Dioscuri (Cabiri, *Μεγάλοι θεοί*) of Pelasgic origin. Their chief seat of worship was at Thoricus (and Sunium). They presided over metallurgy and the pre-Hellenic "coinage" of Attica. The semicircular building at Sunium, called by Staës (*Ἀρχ. Ἐφ.* 1900, p. 135) a granary, was the Attic mint of the time of the Peloponnesian war. *Moneta Salutaris* of Rome was an imitation of Epione of Sunium. Two colossal "Apollo" statues found at Sunium (*Πρακτικά*, 1906, p. 85; *Ath. Mitt.* 1906, p. 363; *A.J.A.* 1907, p. 96; W. Deonna, *Les "Apollons archaïques,"* Geneva, 1909, pp. 135-138) are interpreted as representations of this pair of deities or heroes, and it is hinted that other similar figures should be similarly interpreted.

The monograph contains many other observations, theories, and suggestions relating for the most part to early Attic religion and traditions.

The West Pediment of the Temple of Poseidon at Sunium.—In *Ἀρχ. Δελτ.* I, 1915, pp. 1-27 (19 figs.) A. K. ORLANDOS discusses the construction of the west pediment of the temple of Poseidon at Sunium, of which parts have been excavated west of the temple. Two upright blocks from the back make it possible to determine the height of the pediment. Part of one of the end acroteria was discovered, as well as the block which supported it. The latter is carved with a palmette and lotus design. The central acroterium was found in 1873 and was long supposed to have belonged to a grave monument. The design consists of spirals and palmettes crowned by a fan-shaped palmette. The acroteria were of a coarse island marble. Part of the cornice was also found. The pattern of the design upon it is still preserved although the colors have perished. It consisted of a double palmette and lotus band. The writer also discusses the reconstruction of the roof.

The Temple of Apollo Ptoios.—In *Ἀρχ. Δελτ.* I, 1916, pp. 94-110 (19 figs.) A. K. ORLANDOS publishes a study of the architectural details of the temple of Apollo Ptoios. It was a hexastyle, peripteral Doric temple 24.72 m. long and 11.65 m. wide, with thirteen columns on the sides. It had a pronaos but no rear chamber.

SCULPTURE

A Greek Bronze Head of the Fifth Century B.C.—A fifth century bronze head belonging to the Ashmolean Museum is published by P. GARDNER in *J.H.S.* XXXIX, 1919, pp. 69-78, 232 (pl.; 4 figs.). It is small life size, evidently broken from a statue of a young boy, and it shows him in the act of binding on the fillet of victory. The metal is about $\frac{3}{8}$ of an inch thick, cast by the cire-perdue process. Although fragmentary and far from complete, the head has distinct charm. It is of the Polyclitan school with Attic leanings. A palmette or lotus pattern inlaid in silver on the fillet suggests a connection with the palmette crown of Hera and a possible origin at Olympia.

The Warrior from Daphni.—At the November (1915) meeting of the Berlin Archaeological Society, Herr Neugebauer spoke on the torso of a warrior from Daphni, in the National Museum at Athens, which was published by Richardson in *A. J. A.*, First Series, IX, 1894, p. 53. It is of more than life size and belonged to a combat group, and although the body and the right leg to below the knee alone are preserved, the position is sufficiently clear. The man had sunk upon the left knee and was facing his opponent, with body

thrown violently back and right leg outstretched at an angle of 60° with the left. The style is Aeginetan rather than Attic, and dates between the time of the west pediment and that of the east pediment of the temple of Aphaea, but this is not itself a pediment figure. Its artistic importance lies in the position of the body and in analogies with the discus-thrower of Myron, with drawings on red-figured vases, etc. Possibly search for the temple of Apollo which Pausanias says was on the Sacred Way, near the site of modern Daphni, would throw some light on the meaning of the group. (*Arch. Anz.* 1915, cols. 274-278; 2 figs.)

Dionysus-Sardanapalus.—At the December (1915) meeting of the Berlin Archaeological Society, the seventy-fifth Winckelmannsfest, W. AMELUNG spoke on the bearded, seated figure in the Vatican commonly known as Sardanapalus. A replica found in Crete, with ivy crown and traces of a thyrsus, proves that the type is a Dionysus. A study of these two statues, with replicas at Athens and London and copies of the head in Palermo, Naples and Florence, suggests a Praxitelean original, although the drapery of the London example is more in the style of the fifth century. (*Arch. Anz.* 1915, cols. 279-282.)

A Praxitelean Statue from Acarnania.—In *R. Arch.*, fifth series, X, 1919, pp. 273-276 (pl.), FRANZ CUMONT publishes a statue of Praxitelean style, which is said to have been found among the ancient ruins near the village of Zaberda, south of Vonitza, in Acarnania, and was brought to Brussels in 1913. The pedestal—undoubtedly the original one—bears the name Ἀγνησάρεα, in letters of a time not far from 300 B.C. The statue (height 0.538 m.) represents a young woman with two torches, i.e., with the attributes of Cora (cf. the relief from Eleusis, *Ath. Mitt.* XX, 1895, pl. VI). The style is obviously Praxitelean, and the statue may possibly be a copy of some work of Praxiteles.

The Portraits of Menander.—In *Jb. Kl. Alt.* XXI, 1918, pp. 1-37 (10 pls.; 5 figs.) F. STUDNICZKA sets forth the evidence for identifying as portraits of Menander the well-known series of heads representing a handsome man of about fifty years of age. He thinks that there are at least thirty-two ancient copies extant. The portraits show the influence of Lysippus.

The Venus of Melos and the Apollo of Cyrene.—The chance juxtaposition in the British Museum of the Apollo of Cyrene with a cast of the Venus of Melos, brought out a marked resemblance between the two statues in structure, and treatment, so that they may well be regarded as the work of the same artist. This large cult statue of Apollo, found at Cyrene by the British excavating party, is an important original Greek work of the second century B.C. and deserves much more appreciation than it has yet received. It belongs to the first and best of the five classes which should be distinguished in late classical sculpture, too often dismissed as an unimportant whole. Several suggestions for the missing parts of the Venus are to be found in later imitations of the type. Thus, the left foot was supported on some object several inches high; the drapery was not necessarily held by the right hand; some upright object, perhaps a male figure on a smaller scale, a statuette, stood as a support at the left side of the statue. (W. R. LETHABY, *J.H.S.* XXXIX, 1919, pp. 206-208; fig.)

The Victory of Cyrene.—In *Rend. Acc. Lincei*, XXVII, 1918, pp. 356-364, (pl.) L. MARIANI discusses a statue of Victory, found, among other remains dating from the time of the Antonines, in a precinct of Aesculapius, at Zavia

el Beda (the ancient Balagrae) in the Cyrenaica. It is of a somewhat unusual type, severe and hieratic, motionless and calm, less than life-size (1.58 m. in height), and made from a fine-grained Greek marble. Dress and pose recall the best classical period of Greek art, the Lemnian Athena or the Athena Parthenos for example. The wings are rather inorganically attached and the impression of forward movement is given by placing the figure on a plane which slopes slightly to the front. The derivation from Athena statues is further indicated by a small, almost brooch-like aegis.

The Faulty Colossus.—In *Sitzb. Mün. Akad.* 1915, 3, pp. 3–10, PAUL WOLTERS ('Archäologische Bemerkungen,' II, 4.) discusses the passage in *Περὶ Ὑψους* 36 ὁ κολοσσὸς ὁ ἡμαρτημένος οὐ κρείττων ἢ ὁ Πολυκλείτου δορυφόρος, and the modern attempts to explain it. He concludes that the colossus referred to is the Colossus of Rhodes and that there is an error in the text; ἡμαρτημένος must be wrong, and Χάρητος or some other word applicable to the Colossus of Rhodes should be substituted.

VASES AND PAINTING

Red-Figured Cups.—Some remarks on the work of the vase painter Douris and upon red-figured cups by other artists, with references to the writer's *Vases in America*, are published by J. D. BEAZLEY in *J. H.S.* XXXIX, 1919, pp. 82–87 (pl.; fig.). Of the three cups illustrated, one by the Panaitios painter and apparently dedicated to Douris, belongs to the owner of Lewes House; the other two, by the Colmar painter, are in the University Museum at Philadelphia and in the Hofmuseum at Vienna.

A Vase Fragment from Orvieto.—A red-figured cylix from Orvieto, of which only the stem with the central portion of the bottom is preserved, shows the figure of a seated man, drawn in a style belonging to the late severe period and most nearly resembling the work of Brygos, especially in the wide folds of the drapery and the form of the eye. (E. D. VAN BUREN, *J. H.S.* XXXIX, 1919, pp. 79–81; 2 figs.)

Reappearance of Greek Vases.—In a sale at Sotheby's, in London, February 23, 1920, of several collections of antiquities (of which an illustrated catalogue appeared), the following vases were sold: *Annali*, 1849, pl. B (Cylix by Euerigides; *Catal.* No. 242, pl. ii); *Bull. Napol.* VI, pl. 2 (formerly in the possession of Barone; *Catal.* No. 248); *Bull. Napol.* IV, pl. 5 (Amphora, Atlas and Sphinx; formerly Barone's; *Catal.* No. 266). (*S. R., R. Arch.*, fifth series, X, 1919, p. 368.)

Peleus on Mount Pelion.—In *Sitzb. Mün. Akad.* 1915, 3, pp. 10–20 ('Archäologische Bemerkungen,' II, 5), PAUL WOLTERS interprets the drawings on a black-figured Attic amphora (*Not. Scav.* 1913, p. 366, Fig. 3) as representing Peleus on Mt. Pelion in danger from wild beasts through the machinations of Acastus—a danger from which he is saved by Chiron. The sword (μάχαιρα, here represented as similar to the *espada falcata* of Spain) which Peleus received from the gods is connected with this legend, several forms of which are referred to. A jug in the British Museum (*Cat. of Vases*, II p. 285, B620; *J. H.S.* I, 1880, pl. 2) and a similar jug (evidently intended to form a pair with the other) in the possession of Mrs. L. Mond (*Burlington Fine Arts Club, Exhibition of Ancient Greek Art*, 1904, pl. 98, p. 115, No. 62) illustrate the same story.

Micon's Fourth Picture in the Theseum.—On the large red-figured crater from Orvieto in the Louvre, the picture on the reverse has been recognized as the slaying of the children of Niobe, a copy of Micon's painting in the Anaceum at Athens. It shows his peculiarity of having parts of the figures, or of the action, hidden behind the rocks, as the projecting tail of an arrow for the only sign of a fallen Niobid. The more elaborate picture of the obverse has not hitherto been satisfactorily explained, but a clue is given by P. Gardner's suggestion that the two recumbent and seated figures at the bottom in the middle are Theseus and Pirithous. The subject is the rescue of the two heroes from Hades by Heracles, who is shown above them, fresh from his exploit of overcoming Cerberus without arms or armor. Most of the other figures can be identified as Iolaus, Athena, the Dioscuri, etc., and they are all supposed to be standing in a circle or semicircle like the groups of statues of the time. An allusion of Pausanias had already been interpreted by Brunn to indicate a fourth painting by Micon in the Theseum, representing some scene connected with the close of the hero's life. This picture was probably the original of the vase painting in question, which has the same characteristic rocky ground, hiding parts of the scene. The well-known crater at Bologna with the reception of Theseus by Poseidon at the bottom of the sea, although itself a generation later, must have been painted under the influence of a similar picture by the same artist. The black background of the two vase-paintings, representing Hades and the inside of the sea, may well reproduce a dark background in the wall-paintings. The earlier mode of painting dark figures on a light ground was succeeded by painting light on dark or even dark on dark, and Micon probably employed and may even have introduced the new technique. It was used in other arts in the fifth century as in the frieze of the Erechtheum, with white marble figures on a dark blue stone ground. As Micon was an elder contemporary of Polygnotus, his painting of Hades would naturally have preceded and been the model for the latter's Nekuia in the Lesche at Delphi, and in fact certain attitudes are seen to be copied. They are both, in a sense, forerunners of Dante's Inferno. (J. Six, *J. H. S.* XXXIX, 1919, pp. 130-143; 3 figs.)

INSCRIPTIONS

Greek Epigraphy, 1915-1918.—M. N. Ton's recent survey of published work on Greek inscriptions covers the period from July 1915 to December 1918. The new material brought out was somewhat scanty, but there was a surprisingly steady flow of books and articles dealing with all aspects of the subject. Of *Inscriptiones Graecae*, the Eubœan fasciculus appeared in 1916, and two fasciculi of the second or minor edition, containing Attic inscriptions, in 1916 and later. The *Sammlung der Griechischen Dialectinschriften* was completed, after thirty-two years, with a fasciculus of *addenda*, etc. to the Cretan and Sicilian inscriptions. The historical portion (Vols. 1 and 2) of the third edition of Dittenberger's *Sylloge* appeared. Vols. 3 and 4 will contain civic, religious, and private inscriptions and indices. The publication of the Greek inscriptions in the British Museum, begun in 1874, was completed in 1916 with a section containing 232 texts, many of the first importance. The Museum published also a *Guide* to its 101 select Greek and Latin inscriptions on exhibition. Also

to be noted are Nicole's *Corpus des céramistes grecs*, containing a list of the extant signatures of 131 potters and painters, and a catalogue of the stamped amphora handles and tiles in the Hermitage collection at Petrograd. There were also published some important articles on the origin of the Greek alphabet. Many new Attic inscriptions were recorded, and much study given to others already known. There is also some important new material from Argos, with discussions on the formulae of Argive decrees, the Argive calendar, etc. These and many other articles from French, German, Italian, Greek, British and American periodicals, are noticed under the headings of Peloponnesus, Northern and Central Greece, Aegean Islands, Asia Minor, and outlying regions such as Italy, Macedonia, Syria, etc. (*J.H.S.* XXXIX, 1919, pp. 209-231.)

Inscriptions from Thermon.—In 'Αρχ. Δελτ. I, 1916, pp. 45-58 (6 figs.) G. SOTERIADES publishes thirty-five inscriptions from Thermon. One consists of twelve decrees granting *προξενία*. Another bears the sculptor's signature *Λύσιππος ἐποίησε*, but probably does not refer to the great Lysippus. *Ibid.* pp. 280-284 K. A. ROMAIOS adds corrections to the readings of four of the inscriptions.

Inscriptions from Crete.—In 'Αρχ. Δελτ. II, 1917, pp. 1-12 S. A. XANTHOUDIDES publishes three Greek and two Latin inscriptions recently discovered in Crete.

Inscriptions from Beroea.—In 'Αρχ. Δελτ. II, 1917, pp. 144-163 (15 figs.) A. K. ORLANDOS publishes thirty-two inscriptions from Beroea and the vicinity. One dates from the third century B.C., twenty-six from the first five centuries A.D., and five are Byzantine.

An Inscription of the Year 320.—In 'Αρχ. Δελτ. I, 1916, pp. 195-224 (fig.) V. LEONARDOS publishes the first part of a decree of Demades of the year 320/19 found on the north slope of the Acropolis.

The Inscribed Ring from Ezerovo.—In *R. Ét. Anc.* XXII, 1920, pp. 1-21 G. SEURE discusses the ring from Ezerovo which has upon it what has been supposed to be a Thracian inscription. He shows that the words make up three proper names and that we have no inscription in the language of Thrace. It was a spoken, not written language and is lost beyond recovery.

COINS

The Primitive Hellenism of Macedonia.—In *J. Int. Arch. Num.* XIX, 1918-1919, pp. 1-262 (20 pls.; table of weights), J. N. SVORONOS discusses the early coins of Macedonia to prove the Hellenism of the country. A preface (pp. i-xv), addressed to M. Ernest Babelon, describes in eloquent language the difficulties under which Greece labored, and the part she played, in the great war of 1914-1918.

The first part of the present article is a new edition, with few changes of the article entitled 'Numismatique de la Péonie et de la Macédoine avant les guerres médiques' (*J. Int. Arch. Num.* 1913). It contains catalogues of the silver coins ascribed to the Derronians, Laeaeans, Edonians, and other tribes and cities, and the results of the study of these hitherto "uncertain" coins is that they are all ascribed to Paeonian sources. The second part of the article (pp. 160-262) discusses the various sources from which the Greeks could obtain gold. The result reached is that the chief source was the mines of the

Pangaeus, in Paeonia. Hitherto all the early coins of gold or electrum have been ascribed to the Ionian and Carian cities of Asia Minor, and the Paeonians, who possessed the richest known gold mines, have been supposed to have struck no coins of that metal. The legends concerning the inventors of coinage are discussed, and it is found that several tales point to Paeonia as the earliest home of coinage in gold or electrum. Catalogues of early electrum coins of Paeonia (formerly attributed to cities of Asia Minor, or left "uncertain") are accompanied and followed by accounts of the vicissitudes of some of the Paeonian types under Milesian and Persian domination, of a Pangaeian monetary league, of the influence which the gold of Pangaeus exerted upon the course of Greek history, and of the policy of the Athenians, who left to their subject city Cyzicus the coinage of pieces of electrum, contenting themselves with the silver coins which were widely and favorably known.

GENERAL AND MISCELLANEOUS

The Treasure from Tiryns.—In the *Supplement* to 'Αρχ. Δελτ. II, 1917, pp. 13–21 (22 figs.) A. PHILADELPHUS describes the treasure found at Tiryns in 1916 (see A.J.A. XX, 1916, p. 363). Two gold rings and a hematite seal cylinder are the most interesting objects in it. One ring, which is the largest Mycenaean ring yet found, has a bezel 5.6 cm. long and 3.3 cm. wide, with a religious scene engraved upon it. At the left a goddess dressed in a long spotted chiton with sleeves and wearing a round coronet, bracelets and earrings is seated facing to the right. She holds in front of her a funnel-shaped rhyton. Beneath her feet is a footstool, and behind her chair an eagle. In front of her four demons are approaching one behind the other. They have the heads and bodies of lions, except that each has a short horn in the middle of its forehead. They are standing on their hindlegs, with the right foreleg raised to the head and the left grasping a long-necked vase. Upon their backs they appear to be wearing loose skins. In front of the goddess is a pillar supporting a vessel without handles, and in front of each of the demons is a tree with branches, intended to show the location of the scene. Above appear the sun and moon and, perhaps, stars; also branches with leaves. Below is an ornamental band similar in design to the "kyanos" frieze in the palace at Tiryns. The second ring has a bezel about half as large as the first (3.4 cm. by 2 cm.) also engraved. At the left is a gate, above which and to the left are different objects including a double axe. From the gate advance a man and a woman. The latter, who wears the usual Mycenaean dress, has her hands extended as if addressing the man. In front of these figures are two others, a man holding in his right hand a bow or spear, and a woman also with arms raised. At the right is a long curved boat. The benches, oars, mast and yards are indicated, and to the left is a large fish. In the boat, near the cabin, stand a man and a woman conversing. Two men appear to be rowing, and suspended above are five vases. In the vacant space there are various objects. The seal cylinder is 2.7 cm. long and 1.3 cm. in diameter. Upon it there are represented facing each other two bearded divinities with hoofs instead of feet wearing on their heads high conical hats or helmets. They grasp a sceptre. Their dress is peculiar consisting of short trousers extending from the waist to the knee. To the right and the left of this central group are two rows of animals, some

mythical, and a tree. Above are two flying eagles and what may be intended for the starry heaven.

Minoan Statuettes.—In *Ἀρχ. Δελτ.* II, 1917, pp. 164–170 (3 figs.) J. HATZIDAKIS describes three very crude statuettes of men found in different places in Crete. One is of a light green stone not found in Crete, and the other two of bronze.

The Gold Bricks of Croesus.—In *Ἀρχ. Δελτ.* I, 1916, pp. 111–114 (4 figs.) CH. TSOUNTAS argues that the gold bricks dedicated by Croesus at Delphi and serving as a base for his gold lion (*Hdt.* I, 50) were arranged in the form of a three-stepped battlement. He thinks that the dedication is to be connected with the prophecy in regard to the freedom of Sardis from capture related by Herodotus (I, 84).

Ionic Amber.—In *Rass. d'Arte*, XIX, 1919, pp. 183–200 (22 figs.), C. ALBIZZATI publishes a piece of carved amber in the Morgan collection of the Metropolitan Museum, New York, the subject of which is probably Aphrodite and Anchises. The fibula, of which the amber forms the setting, was found on the coast to the north of Ancona and the carving is here shown by many comparisons to be Ionic work of the sixth century B.C. The excellent workmanship, the splendid state of preservation, and the large size of the carving render it a very exceptional treasure.

Solon.—Under the title *Solon the Athenian* (*University of California Publications in Classical Philology*, VI. Berkeley, 1919, University of California Press. 318 pp. 8 vo. \$3) Professor IVAN M. LINFORTH gathers together what is known of Solon. The work is divided into three parts, the first dealing with his biography; the second with the fragments of his poems which are published with a translation and commentary; and the third with a series of appendices. In these are discussed Salamis, the date of Solon's archonship, the *seisachtheia*, the laws and the axones, changes in weights, measures, currency and in the calendar, his travels, relations with Pisistratus, and his death and burial. A bibliography completes the book.

The Greek Theatre of the Fifth Century.—Professor JAMES TURNER ALLEN has published a monograph on the Greek theatre of the fifth century (see *A.J.A.* XXII, 1918, p. 449). After an introduction he discusses the Athenian theatre of the fourth and fifth centuries; argues that the fifth century orchestra had the same diameter as that of the fourth; that the stage-building was on a circular terrace with the orchestra; that the *paradoi* sloped down from this terrace at an obtuse angle away from the stage-building, thus giving rise to the terms *ἀναβαλνν* and *καταβαλνν*. He also takes up changes of scene and how they were effected, and the origin of the *proskēnion*. [*The Greek Theater of the Fifth Century before Christ*. By JAMES TURNER ALLEN. Berkeley, 1920, University of California Press. 119 pp.; 31 figs. 8vo. \$1.25.]

Archaeological Miscellany.—In *Sitzb. Mün. Akad.* 1916, 2, pp. 1–20, CARL ROBERT publishes 'Archäologische Miscellen.' (1) He explains Cleobis and Biton as those (Delphians) who introduced the cult of a Mother-goddess, perhaps Leto, perhaps Demeter. The inscription on their statues is not in the Argive dialect or alphabet. Whether the statue of Biton at Argos (*Paus.* II, 19, 5) was early enough to contribute to the error of Herodotus, is not, as yet, to be determined. (2) The description of the Chimaera (*Iliad* VII, 181–182) does not agree with works of art, as does that of Hesiod (*Theog.* 319 ff.). The

lines 181-182 in the *Iliad* are later interpolations. The prototype of the Chimaera was a Mycenaean demon, a woman with a goat's head, which was supplanted by another Mycenaean mixed form composed of lion, goat, and snake. (3) The name *polos* (πόλος) for a cylindrical ornament on the heads of female statues is quite unjustified. The πόλος is the vault of heaven. Only Pausanias (IV, 30, 4) uses the word to designate a head-ornament. His source is a commentary on Pindar or an annotated edition of Pindar, which was also used by Plutarch (*De Roman. Fort.* ch. 10, p. 322); but Pausanias misunderstood it. Any πόλος worn by the statue of Tyche to which Pausanias refers would be a stephane adorned with stars, not a cylinder.

Greek Compasses.—In *Sitzb. Mün. Akad.* 1916, 3, pp. 1-104 (12 figs.), ALBERT REHM discusses Greek compasses (*Windrosen*) and their development from the earliest times through the Ionic philosophers, Aristotle, and Timosthenes to the Hellenistic system of eight winds.

Greek Votive Offerings.—In *B. Metr. Mus.* XV, 1920, pp. 36-38 (2 figs.) H. McC. gives a general account of the Greek votive offerings in the Metropolitan Museum, New York.

Theban Politics from 404 to 396 B.C.—In *R. Ét. Gr.* XXXI, 1918, pp. 315-343 P. CLOCHÉ discusses Theban politics from 404 to 396 B.C.

Thracian Archaeology.—In *R. Arch.*, fifth series, X, 1919, pp. 333-361 (2 figs.) GEORGES SEURE continues his discussions of unknown or little known Thracian monuments and inscriptions (see *A.J.A.* XXIII, 1919, p. 176). In this article the text of twenty inscriptions is given, nine of which are Byzantine. Nearly all of these are fragmentary. Of the other inscriptions, most of which are fragmentary, five are Greek and five are Latin. All are epitaphs except one—the name (probably of a town, perhaps a transcription of a Latin ablative) Πάβταλις and (in different letters) ΠΙΤΑ=π(λινθος)νά, i. e. 401. Brief descriptions of the stones and the sites where they were found, as well as some corrections of former articles, are given.

A Thracian Altar.—The upper half of a square altar found in Kara Osman in southern Bulgaria some years ago, is published by G. KAZAROW in *Arch. Anz.* 1919, col. 166-177 (7 figs.). The inscription, though incomplete, indicates the existence of a band or club of mystae, and the reliefs on the four sides of the shaft represent the various Thracian chthonic deities: Hecate, Dionysus, the goddess with patera and horn, the triad of nymphs, and the Horseman, the last shown in an attitude of combat, with shield and spear.

ITALY

SCULPTURE

The Sculptures of the Temple of Apollo at Pompeii.—In *Sitzb. Mün. Akad.* 1915, 3, pp. 20-54 (3 figs.) PAUL WOLTERS ('Archäologische Bemerkungen,' II, 6) discusses and corrects in many details the reports of the excavations carried on in the temple and precinct of Apollo at Pompeii in 1817 and at later times. From these reports and from the existing remains he reconstructs in great measure the arrangement of the statues and other sculptures of the precinct. The bronze Apollo and the bronze Artemis corresponded one to the other, likewise the marble Aphrodite and Hermaphrodite. The draped herm of

Hermes had a herm of Heracles as its mate. Only Artemis and Aphrodite had altars (the great altar was Apollo's, who, therefore, needed no other). Some of these statues were repaired in antiquity, and the arrangement as here determined may have been in part, at least, a result of the restoration necessitated by the earthquake of 62 or 63 A.D.

A Roman Relief.—In *Sitzb. Mün. Akad.* 1919, 6, pp. 1–8 (pl.) JOHANNES SIEVEKING shows that a relief in Berlin representing a Roman soldier belongs with a relief in the Museum of the University of Pennsylvania (*Not. Scav.* 1909, p. 212; *Museum Journal*, IV, 1913, p. 142; *A.J.A.* XVIII, 1914, p. 526). Both were found at Pozzuoli. Their date is the time of Hadrian. The slabs may have been taken from an earlier monument (of Domitian?), for on the back of the Philadelphia fragment is an erased inscription. They probably served as sheathing for a pedestal.

VASES

Etruscan Vases.—In *Mél. Arch. Hist.* XXXVII, 1918–1919, pp. 106–178 CARLO ALBIZZATI discusses twenty-nine examples of red-figured Etruscan ware, now in the Museo Gregoriano and elsewhere, which he believes were made in Vulci between 370 and 330 B.C. He distinguishes among them the work of three master craftsmen.

Vases from Lower Italy.—In *Mus. J.* X, 1919, pp. 217–225 (8 figs.) S. B. L(UCE) publishes a Messapian crater, a Peucetian crater, a Daunian crater and cup, and four specimens of "local Apulian" ware in the Museum of the University of Pennsylvania.

Orphism and Italiote Vases.—In *Rend. Acc. Lincei*, XXVII, 1918, pp. 333–355 G. PATRONI, defends the views advanced by him in *Rendiconti del R. Istituto Lombardo*, 1917 ('Eros e Sirena') against the attacks of an anonymous writer in the *Rivista Indo-greco-italica* of Naples. He maintains that he is there falsely charged with having attempted to prove that Orphism as a cult had an influence over Italiote artists comparable with that which it exerted in Attica; that what he had meant was that such beliefs, like other philosophical teachings, were to be taken into account as one among various influences operative there. He insists that the existence of utensils and furnishings of ordinary life in tombs or graves is not inconsistent with the Dionysiac and Elysian beliefs of Orphism and assails his critic's choice of vases in support of his own point of view as utterly misleading.

INSCRIPTIONS

The Cistiferi of Bellona.—In *C. R. Acad. Insc.* 1919, pp. 256–260 F. CUMONT publishes additions and corrections to the important inscription relating to the cult of Bellona recently found at Madaura (see *ibid.* 1918, pp. 312 ff.; *A.J.A.* XXIII, 1919, p. 320). The restoration *halstiferorum* is shown to be incorrect. Perhaps *cisthiferorum* is what was written. He interprets FANAS as *fana(ticu)s* or *fan(aticus)*, a *s(acris)*.

The Tablet at Leeuwarden.—In *C. R. Acad. Insc.* 1919, pp. 265–282 E. CUQ discusses and proposes interpretations in the wax tablet found at Tzum in northern Holland and now in the museum at Leeuwarden (see Vollgraff, *Annales de la Société de Frise*, 1917, pp. 71–101; *Mnemosyne*, XLV, pp. 341–

352; and Boissevain, *Mnemosyne*, XLVI, pp. 201-215). It is part of a triptych. The Latin inscription on one leaf has to do with the sale of an ox; the other contains the names of four people who sealed the act. It probably dates from the time of Claudius.

The Cippus Abellanus.—In *Sitzb. Mün. Akad.* 1915, 10, pp. 1-68, LEOPOLD WAGNER reprints the text and Latin translation of the inscription on the *cippus Abellanus* and discusses various questions connected therewith. The various theories concerning the *meddix tuticus* are reviewed. He may have been an exceptional official, like the dictator in Rome, or one of two colleagues (like the Roman consuls), though that would seem to imply inferiority on the part of his colleague. The word *meddix*—which seems to mean *magistratus* in general—may have changed its meaning as time went on, like the word *praetor* in Latin. The *meddix degetasius* of the cippus may have been the equivalent of a Roman *quaestor*. The provisions relating to the use of the treasure and lands of the temple of Heracles prove that the ideas of federation and of corporate rights of states were similar to those of early Rome, as well as to those of Greece and even of Germany. The temple of Heracles, like the land belonging to it, is regarded as the property, not of the god, but of the Nolans and Abellans. Property and objects connected with worship might belong to the deity, to the state, or to individuals. In Rome, from about 50 B.C., or earlier, until Christianity became the state religion, the theory prevailed that *res sacrae* could not be private property. Elsewhere, and at Rome itself at different times, both law and practice varied. Such variations are here discussed.

The Inscribed Etruscan Mummy Bands.—In *Rend. Acc. Lincei*, XXVIII, 1919, pp. 69-84 ELIA LATTES essays to cast light upon the interpretation of the inscribed Etruscan mummy bands at Agram. (Cf. Herbig, 'Die Etr. Leinwandrollen des Agramer National Museum' in the *Abh. Mün. Akad.* XXV, 1911, pp. 3-44.)

COINS

Mark Antony's Coinage at Anagni.—A. W. VAN BUREN suggests that the statement by Servius (on *Aen.* VII, 684) that Antony struck coins in the name of Cleopatra at Anagni may be due to a false reading of *Armenia* as *Anagnia* (cf. Plate CXV, No. 15, of the British Museum *Catalogue of Coins of the Roman Republic*). Other attempts to account for the surprising statement of Servius are mentioned. (*Num. Chron.* 1919, pp. 254-255.)

Origins of Roman Imperial Coinage.—As against Mommsen and Grueber, H. MATTINGLY argues that the imperial coinage was not founded on the old senatorial coinage of Rome, but on the right of coinage occasionally exercised by generals in the field in Republican times. Augustus derived his authority for the coinage of money from his *imperium* in the provinces, and established his chief mint accordingly not at Rome but at Lyons. He merely left the token coinage in *aes* under control of the senate. (*Num. Chron.* 1919, pp. 221-234.)

Coinage of Aurelian.—In opposition to the view of Mr. Sydenham, in his articles on the Roman monetary system already mentioned in this journal, PERCY H. WEBB argues that Aurelian did not attempt to reform the existent system, but to restore it in better shape. The silver-washed radiate pieces were intended to be the direct successors of the original *antoninianus* of Cara-

calla. The marks XX, XXI, XX.1, KA, etc., are to be interpreted as meaning that twenty of these (token) coins are equal to one *aureus*. The coins marked VSV are certainly not *quinarii*, and the mark cannot be an expression of value. Sir Arthur Evans is probably right in reading it as *Vota Solvta Quinquennialia*. (*Num. Chron.* 1919, pp. 235-243.)

GENERAL AND MISCELLANEOUS

The Origin of the Etruscans.—In *Rend. Acc. Lincei*, XXVIII, 1919, pp. 173-182 ALESSANDRO DELLA SETA, admitting that the two ancient theories of a Lydian or a Pelasgian origin for the Etruscans have little basis in fact, as against linguistic and cultural data, argues that the Pelasgian theory arose from a misread passage of Herodotus (I, 57) where Κρηστών (in Thrace) and Κρηστωνιῆται have been emended, so Della Seta thinks, by Hellanicus himself (Dionysius Halicarnassensis, I, 28, 29) whom he calls a Pan-Pelasgist, into Κρότων and Κροτωνιῆται. Some have believed that Κρότων was the original reading and that this was changed to Κρηστών under the influence of Thucydides, IV, 109, but convincing arguments are here adduced showing that Herodotus thinks of the Pelasgians as an Aegean race. Dionysius' own belief is that the Etruscans were autochthons.

Documentary Evidence for Early Roman History.—In *Rend. Acc. Lincei*, XXVIII, 1919, pp. 85-99 and 127-140, CORRADO BARBAGALLO treats of the documentary evidence on which the historians of early Roman times based their work, in its bearing on the authenticity of the traditional accounts. He discusses the passage in which Livy (V, 40) describes the burying and carrying away of the most important documents at the time of the sacking of the city by the Gauls, and emphasizes the fact that the Capitol did not fall into the hands of the invaders. The temples, bridges, aqueducts, walls and public buildings, the statues of famous men, the *imagines* of their ancestors must, he feels sure, have been mute witnesses to the Romans of their earlier history. In the second article the coins, inscriptions, pontifical, royal and civil records, decrees of the senate, acts of comitia, etc., private archives, and documents existing outside of Rome, are separately treated and discussed.

The Roman Mile-Stones of Syria.—Under the title *Die römischen Meilensteine der Provinzen Syria, Arabia und Palaestina* (Leipzig, 1917, Hinrich. 102 pp.; map; reprinted from *Z. D. Pal.* V. XL, pp. 1 ff.) Dr. PETER THOMSEN discusses the Roman roads in Syria, Arabia and Palestine and comments upon 306 Roman mile-stones so far recorded.

The Date of the Removal of the Colossus of Nero.—In *Mél. Arch. Hist.* XXXVII, 1918-1919, pp. 285-296 F. PRÉCHAC attempts to show that the date of the removal of the Colossus of Nero from its original site, in order to make more room for the temple of Venus and Roma, fell between January first and April twenty-first in the year 128 A.D.; and his arguments carry much weight.

The Lupercalia and the Purification of the Virgin.—In *R. Hist. Rel.* LXXIX, 1919, pp. 1-13 J. TOUTAIN returns to the old problem of the connection between the Roman Lupercalia and the festival of the Purification of the Virgin suggested by the Venerable Bede. He points out resemblances between the two festivals.

Roman Surgical Instruments in Baltimore.—About 1912 there was discovered at Colophon a collection of thirty-six surgical instruments which had apparently belonged to a Roman physician of the first or second century A.D. With one exception they are of bronze, and include knives, forceps, probes, cupping-vessels, a balance, a bow drill, etc. The drill is an instrument rarely found, and was used in injuries to the skull. The collection was presented to Johns Hopkins University six years ago and is now on exhibition in Gilman Hall. (Baltimore *Evening Sun*, May 21, 1920.)

Roman Bronze Pendants.—In *Proc. Soc. Ant.* XXX, 1918, pp. 54–63 (15 figs.) R. A. SMITH discusses a serrated iron nose-band for a horse and connects with it a series of Roman bronze pendants of peculiar shape. The latter were probably charms.

An Ornamental Lance Head.—The signum of a *beneficiarius consularis*, or some other member of the staff of a *legatus consularis*, is seen in an ornamental lance head now in the museum at Wiesbaden. (E. RITTERLING, *Bonn. Jb.* 125, 1919, pp. 9–37.)

The Harbor of Cologne in Roman Times.—The harbor of Cologne in Roman times is the subject of an investigation by H. J. LUECKGER in *Bonn. Jb.* 125, 1919, pp. 163–177 (pl.).

FRANCE

The Antiquities of Roussillon.—In *R. Ét. Anc.* XXI, 1919, pp. 271–289 R. LANTIER gives a brief account of the scanty remains of antiquity found in the old province of Roussillon, *i.e.*, in the department of the Pyrénées-Orientales.

Bronzes in the Museum at Saumur.—In *R. Arch.*, fifth series, X, 1919, pp. 277–293 (67 figs.), M. VALOTAIRE publishes thirty-seven bronzes in the museum at Saumur. These were found at various times in the neighborhood of Saumur, for the most part near La Dive. They include ten deities, six heads, an engraved mirror (of coarse work, and badly oxidized), fourteen animals or parts of animals, most of which adorned utensils, two phalli, and a few other objects. All are of small size, and all probably of Gallo-Roman origin.

Bronze Axes found at Saint-Pierre-Église near a Dolmen.—In *R. Arch.*, fifth series, X, 1919, pp. 363 f. (fig.) ROBERT FORRER mentions the discovery, in 1722, near Sundhofen, not far from Colmar, of about thirty bronze lances, which have been scattered and for the most part melted, also the discovery, in 1822, of arms and ingots of bronze at Stephansfelden, near Brumath. These were lost in the bombardment of Strasbourg in 1870. He publishes a bronze axe with straight sides (13 cm. long, 6.2 cm. wide), on which is a paper label, written apparently not far from 1800. This gives the information that the axe was found at Saint-Pierre-Église near a dolmen, à la Trigalle, with forty analogous objects. The place is ten to fifteen miles east of Cherbourg, in the department of la Manche. Evidently the axe was part of a store of a merchant or caster of bronze in the First Bronze Age.

The Gallic Word Arcantodan.—In *R. Ét. Anc.* XXI, 1919, pp. 263–270 J. LOTH discusses the word *arcantodan* found on certain Gallic coins and concludes that it is equivalent to *magister monetæ*. *Arcanto* means silver or money.

GREAT BRITAIN AND IRELAND

Antiquities of the Bronze Age.—In *Proc. Soc. Ant.* XXX, 1918, pp. 166–183 (8 figs.) W. J. HEMP discusses various antiquities dating chiefly from the Bronze Age and found at different times in southeastern Carnarvonshire and north-western Merionethshire. Among them are weapons, late Celtic terrets, a gold collar, a sickle, a bucket, etc.

Flint Implements from the Test.—In *Proc. Soc. Ant.* XXX, 1918, pp. 20–27 (10 figs.) W. DALE discusses the flint implements recently discovered in the gravel beds of the river Test at Romsey. *Ibid.* pp. 27–31 R. A. SMITH makes various observations.

A Rare Type of Flint Implement.—In *Proc. Soc. Ant.* XXX, 1918, pp. 160–165 (3 figs.) R. A. SMITH discusses a rare type of flint implement with worked edges, faceted butt and prominent bulb, found at Grime's Graves, Norfolk, in 1914. Many other specimens have been excavated in the cave of St. Bre-lade, Jersey, belonging to the Mousterian period, but elsewhere they are very rare. The type was apparently confined to a definite period.

A Roman Gold Fibula.—In *Proc. Soc. Ant.* XXX, 1918, pp. 184–186 (fig.) W. J. HEMP discusses a Roman gold fibula of crossbow shape, $2\frac{3}{4}$ inches long, and 4 inches wide, from Carnarvon.

A Roman Relief at Colinton.—In *Proc. Soc. Ant.* XXX, 1918, p. 237 G. MACDONALD calls attention to a sculptured slab which has been built into a garden wall at Colinton for more than a hundred years. It proves to be Roman and a dedication to the Mother Goddesses. It is of good workmanship and the first thing of the kind noted north of the Tweed.

The Ancient Salt Works of Essex.—In *Proc. Soc. Ant.* XXX, 1918, pp. 36–53 R. A. SMITH discusses the salt works of pre-Roman times on the Red Hills of Essex, and the ancient methods of making salt.

Irish Serpentine Latchets.—In *Proc. Soc. Ant.* XXX, 1918, pp. 120–131 (16 figs.) R. A. SMITH discusses Irish serpentine latchets tracing developments in form. They are in the shape of a letter S prolonged, and usually have a disk at one end. They were made for five or six centuries ending with the eighth, and have been found in nearly all parts of Ireland. They were used for fastening the clothes.

Cheek-Pieces for Bridle-Bits.—In *Proc. Soc. Ant.* XXX, 1918, pp. 187–189 (fig.) E. C. R. ARMSTRONG illustrates and discusses seven cheek-pieces for bridle-bits in the Museum of the Royal Irish Academy, Dublin.

NORTHERN AFRICA

Carthaginian Civilization.—The fourth volume of Professor GSELL's work on the history of North Africa (see *A.J.A.* XXII, 1918, p. 452) is devoted to the civilization of ancient Carthage. He discusses agriculture, industrial activity (pottery making, working in metal, gem cutting), commerce, the manners and customs of the Carthaginians, their religious life (including an account of their gods and cults, cult symbols, sacred places, priests and priestesses, festivals, etc.), funeral customs, and finally the place of Carthage in history. [*Histoire ancienne de l'Afrique du nord*. Par STÉPHANE GSELL. Tome IV. *La civilisation carthaginoise*. Paris, 1920, Hachette. 515 pp. 8 vo. 25 fr.]

EARLY CHRISTIAN, BYZANTINE AND MEDIAEVAL ART

GENERAL AND MISCELLANEOUS

The Excavations at Bawit.—In *C. R. Acad. Insc.* 1919, pp. 243–248 G. SCHLUMBERGER reports briefly from the notebooks of Jean Maspero on the excavations carried on in 1913 at the fortified convent of Bawit (see *A.J.A.* XVIII, 1914, p. 118). The frescoes are important for the history of Byzantine art. The convent was probably destroyed in the seventh century.

The Byzantine Church on the Areopagus.—In *Ἀρχ. Δελτ.* II, 1917, pp. 119–143 (17 figs.) G. A. SOTERIOS discusses the remains of the church of Saint Dionysius the Areopagite on the north side of the Areopagus.

The Church of Saint Nicholas at Delvinos.—In *Ἀρχ. Δελτ.* I, 1916, pp. 28–44 (19 figs) P. VERSAKIS discusses the Byzantine church of Saint Nicholas near Delvinos, Northern Epirus.

The Stronghold of Chloumoutzi and Its Mint.—In *J. Int. Arch. Num.* XIX, 1918–1919, pp. 273–279 (2 pls.; fig.) GEORGE SOTIRIOU describes a curious furnace found in the strong castle of Chloumoutzi which dominates the peninsula of Chelonata, in Elis (see *A.J.A.* XXIV, 1920, p. 94). Inasmuch as the castle—apparently called also Clarentia, Château Tournois, and Castle Tornese—contained a mint, the conclusion is obvious that the furnace in question was built for the purpose of melting metal for coinage. The castle was built between 1246 and 1278.

Arabic Art in Egypt.—The general characteristics of Arabic art and its contrast with the art of the ancient Egyptians forms the subject of an essay by B. DOBRÉE in *Burl. Mag.* XXXVI, 1920, pp. 31–35 (fig.).

Syrian Silverwork.—In *Gaz. B. -A.* I, 1920, pp. 173–196 (pl.; 7 figs.), L. BRÉHIER, taking as principal basis the discoveries of silver treasures made in recent years near Antioch, traces the development of the silversmith ateliers of that metropolis. Despite marked differences in the pieces, there are certain consistent traditions, such as realistic treatment and preference for coloristic effects on the repoussé work, obtained by the application of gold and enamel. Changes in style were gradual, but two epochs may be distinguished: the first down to the fifth century, was dominated by the tradition of picturesque bas-relief and of Hellenistic art (it is in giving realistic treatment to religious scenes that Syrian artists marked a new direction in religious art); the second, from the fifth century to the Arab invasion, is characterized by a more schematic, monumental treatment.

The Churches of Servia.—In *Proc. Soc. Ant.* XXX, 1918, pp. 10–14 T. G. JACKSON points out that the churches of Servia fall into three groups: (1) those built by Stephen Nemanja and his immediate successors; (2) those built in the fourteenth century and associated with the names of Stephen Urosh and his queen; and (3) those erected at the end of the Servian kingdom by Lazar and the despots in the northern district. The first group although possessing certain eastern features show Dalmatian influence and are more Romanesque than Byzantine. The west doorway in the church at Studenitzza, for example, has a figure of Christ between adoring angels in the tympanum. A peculiar feature in many Servian churches (*e.g.* in the church at Hilendar founded in 1196) is a pronaos of two bays with three aisles. Brick arches and cornices and bands of brickwork in the masonry, found here for the first time in Servia,

became a distinctive feature of Servian architecture. A remarkable church is that built about 1321 by King Urosh Miljutin. The church at Ravanitza is typical of the third group. It has a central dome surrounded by smaller tower domes, and is barrel-vaulted four ways in a cross plan. The exterior is richly decorated with arcading, twisted colonnettes, architrave and friezes carved with fretwork, carved borders to doors and windows, traceried rose-windows, and geometrical patterns in brick.

A Tower of Ivory.—An ivory ciborium with relief figures of the twelve apostles, in the Morgan collection, Metropolitan Museum of Art, New York, is assigned by J. BRECK in *Art in America*, VIII, 1920, pp. 116–123 (pl.) to Syrian workmanship of the fifth century. A. M. FRIEND, Jr. (*ibid.* p. 144) would, however, attribute the ivory to a Rhenish atelier of the eleventh century.

Burgundian Buckles.—In *Proc. Soc. Ant.* XXX, 1918, pp. 63–87 (30 figs.) Sir MARTIN CONWAY discusses several Burgundian buckles adorned with a number of designs or scenes, and dating from the seventh or eighth century. They were charms. Some of the types are of Coptic derivation.

Ancient Subjects in Tapestry.—In *R. Arch.*, fifth series, X, 1919, pp. 294–328 (index, pp. 328–332), L. ROBLOT DELONDRE concludes (see *A.J.A.* XXII, 1918, pp. 226 f.; XXIII, 1919, p. 195) his list of ancient subjects represented in tapestries. The subjects here included are scenes from Greek, Roman, and Jewish history.

Early Christian, Mediaeval and Renaissance Glass.—In *Art Bulletin*, II, 1919, pp. 87–119 (4 pls.), G. A. EISEN discusses the development of work in glass, following the various types from the earliest period of glass-making through Early Christian, Mediaeval, and Renaissance times and describing the different kinds of glass and the methods employed in making them.

ITALY

A Great Contemporary of Giotto.—In *Burl. Mag.* XXXV, 1919, pp. 229–240 and XXXVI, 1920, pp. 4–11 (7 pls.). O. SIRÉN studies the artistic activity of the St. Cecilia Master, to whom he attributes a new work, the full length figure of St. Paul owned by the Bourgeois Gallery, New York. Evidence is also presented for the identification of the St. Cecilia Master with Buonamico Buffalmaco.

Two Sienese Paintings.—In *Art in America*, VIII, 1920, pp. 103–107 (pl.) G. H. EDGEELL publishes the little Crucifixion by Simone Martini in the Fogg Museum of Art, Cambridge, Massachusetts, which he dates about 1335. It is suggested also that the small Crucifixion with the Madonna and St. John in the Boston Museum of Fine Arts, where it is attributed to Lippo Memmi, is by a follower of Simone Martini.

S. Giovanni at Assemini.—In *Boll. Arte*, XIX, 1919, pp. 117–132 (8 figs.), F. GIARRIZZO studies the style and origin of the little church at Assemini, which he shows to be the one referred to in Greek inscriptions as early as the middle of the tenth century. The church is clearly Byzantine in derivation of style and may be dated in the last years of the ninth or early years of the tenth century. Some fragments of carved marble from its altar show closest analogy to works on the continent in the seventh and eighth centuries and were prob-

ably made by a Greek, or one of the Greek school, for some monument constructed in or near Assemini in those centuries and later transferred to the church of S. Giovanni.

Monuments of Sulmona.—The church and palace of SS. Annunziata in Sulmona are described in all their vicissitudes by P. PICCIRILLI in *Rass. d'Arte*, XIX, 1919, pp. 119–137 (32 figs.). The original church belonged to the early fourteenth century, but two earthquakes, one in 1456 and another in 1706, necessitated much rebuilding. The palace shows results of three periods of building, which inscriptions date in 1415, 1483, and 1519.

San Flaviano.—The ancient temple of San Flaviano and two nearby churches are described by V. BINDI in *Rass. d'Arte*, XIX, 1919, pp. 168–182 (18 figs.). The date of the original building of the temple is not known, but it was already famous in the eighth century. Remains of the twelfth and following centuries are still extant. Many pieces of rich ecclesiastical work of the goldsmith's art attest the splendor of the temple in the fourteenth and fifteenth centuries.

Painting in Apulia.—In *L'Arte*, XXII, 1919, pp. 149–192 (26 figs.), M. SALMI gives a contribution to the history of painting in Apulia from the early fourteenth century to the middle of the sixteenth, tracing the successive dominance of Byzantine, Sienese, and Venetian characteristics. Particular attention is given to the trecento frescoes in the church of S. Caterina in Galatina.

SPAIN

Spanish Miniatures.—In *Rass. d'Arte*, XIX, 1919, pp. 149–155 (5 figs.) N. ARTA takes up the problems connected with the codex of the *Cantigas* of Alfonso El Sabio, now in the Biblioteca Nazionale, Florence. There are proofs that the miniatures were painted in Spain in the thirteenth century, and yet the traces of Italian characteristics are so clear in them as to make it almost certain that already before the fourteenth century the influence of Italian painting was getting into Spain.

The Monastery of Siresa.—A history of the monastery of Siresa, Aragón, and a study of its unpublished church are given in *B. Soc. Esp.* XXVII, 1919, pp. 270–305 (6 pls.; fig.), by R. DEL ARCO. The church, dating from the eleventh century, is in the form of a Latin cross with a single apse, and has had in succeeding centuries additions of interesting architectural, sculptural, and pictorial decoration.

The Castle of Zorita de los Canes.—In *B. Soc. Esp.* XXVII, 1919, pp. 90–106 (2 pls.; 2 figs.) L. T. C. y BALBÁS writes on one of the old fortresses important in the mediaeval life of Spain. The castle of Zorita de los Canes, located at the meeting of the Tajo and Badujo, is first mentioned in the ninth century in Arab annals; but no traces of the earliest epochs remain in the ruins today. The chapel, a single aisled type with semicircular apse and a vaulting which shows early Gothic influence, belongs to the twelfth century; but the atrium, which gives access to it, is later, dating from the thirteenth century.

Basilica and Church in Val-de-Dios.—In *B. Soc. Esp.* XXVII, 1919, pp. 77–89 (4 pls.), J. F. MENÉNDEZ describes the basilica of San Salvador and the church of S. Maria la Mayor in Val-de-Dios. The former was consecrated in 892; the latter dates from 1238. The exterior of San Salvador has not been greatly

changed in the course of the centuries; but the interior was covered in the sixteenth century with a pseudo-classic decoration. The walls, vaults, and arches, now cleaned of these additions, appear covered with a unique painted geometrical decoration. The derivation of the style of the basilica is much disputed. The architectural forms seem to bear closest resemblance to Visigothic examples. For the paintings there are no parallels in Visigothic buildings in Spain, but certain symbols used in them, such as that of the half moon, suggest the influence of Christian Arabs. The church of S. María la Mayor, which was the most magnificent in the principality of Asturia, has suffered little change, with the exception of eighteenth century baroque additions to the interior.

FRANCE

Some Romanesque Capitals.—In *Burl. Mag.* XXXVI, 1920, pp. 11-18 (2 pls.; fig.), D. McDougall gives an interpretative description of the choir capitals of the eleventh or twelfth century church of S. Pierre-en-Haute, Chauvigny (Poitou). Though the execution of these figured capitals is crude and barbaric, they compare favorably in interest and fertility of imagination with the most skilled work of the period.

Manuscripts and Textiles.—An example of the identification of date and provenance of textiles by means of comparison with manuscript miniatures is given by I. ERRERA in *L'Arte* XXII, 1919, pp. 193-196 (3 figs.). Two pieces of textiles in the cathedral of Acquisgrana are decorated with peculiar figures of ducks that are strikingly like one from a French miniature of the eighth century. The conclusion from this and documentary evidence is that the textiles originated in the north—France or Belgium—in the eighth century, and that fine textiles, as well as illuminated manuscripts were produced in monasteries.

The School of Godfroid de Claire.—In the sixth and seventh sections of his study of enamels of the school of Godfroid de Claire (*Burl. Mag.* XXXVI, 1920, pp. 18-27 and 128-134; 4 pls.; 3 figs.) H. P. MITCHELL discusses the *corona lucis* in the Minster-church at Aix-la-Chapelle—a late twelfth century work by Wibert, a pupil of Godfroid—and the most interesting of all the works of the school, the pedestal of a cross from the Abbey of St. Bertin, now in the museum at St. Omer. This pedestal is attributed to Godfroid himself and may be dated about 1160.

HOLLAND

The Van Eycks.—In *Gaz. B.-A.* I, 1920, pp. 77-105 (pl.; 10 figs.), P. DURRIEU presents proof of a relationship of the Van Eycks with Jean de Berry. Part of the miniature work on the *Heures de Turin*, as already pointed out by the author, was done by the brothers, with Guillaumé IV of Bavaria, favorite nephew of Jean de Berry, as patron. Further, it seems possible to identify a portrait of the duke in the Ghent altarpiece. But the best evidence of the relationship is given by the diptych in the Hermitage, with paintings of Calvary and the Last Judgment. This, after careful examination, is attributed with certainty to the Van Eycks—and it was the property of the duke of Berry.

Hans Memling.—In *Art in America*, VIII, 1920, pp. 107-116 (3 pls.) M. J. FRIEDLANDER writes on the paintings by Hans Memling in American collections. These include several examples in the Altman collection in the Metropolitan

Museum, New York; the Portrait of a Young Man, owned by Mr. John Willys, Toledo; the Archer, owned by Mr. Michael Dreicer, New York; the Man with a Pink, in the collection of Mr. J. P. Morgan, New York; a Madonna, in the collection of Mr. Martin A. Ryerson, Chicago; and Christ as the Man of Sorrows and the Virgin of an Annunciation, in the collection of the late Mr. John G. Johnson, Philadelphia.

GERMANY

The Illustrated Manuscript of Wolfram's Willehalm.—In *Sitzb. Mün. Akad.* 1917, 6, pp. 1–31 (2 pls.), KARL V. AMIRA describes the fragments (18 in number) of the "grosse Bilderhandschrift von Wolfram's Willehalm" (cf. *ibid.* 1903, pp. 213–240), which have come to light in Meiningen. With the exception of two fragments in Nuremberg, all known fragments of this manuscript are now in the Staatsbibliothek in Munich. The illustrations contain only persons and things mentioned in the text. There is little attempt to produce beautiful pictures, for the illustration of the text is the painter's only object. Details of costume fix the date between 1250 and 1275 A.D.

The Neubauer Chronicle.—In *Sitzb. Mün. Akad.* 1918, 9, pp. 1–51 (6 pls.), KARL V. AMIRA describes a chronicle of Nuremberg, which contains many notes concerning other places, and also 467 illustrations. The chronicle is in the possession of Dr. Chr. Nuhlen, in Murnau. It was compiled and written chiefly, if not entirely, by Wolff Neubauer, and the latest item in it refers to the year 1616. The items are arranged with little regard to chronological sequence and the dates given are frequently wrong. Of the illustrations about 140 are portraits, but many of these can be intended only symbolically (e.g. Mohammed, Charlemagne, etc.). Others resemble more or less closely the known portraits of historical personages; but in these, as also in those illustrations which represent various scenes and actions, symbolism, rather than realism, is the aim of the draughtsmen.

GREAT BRITAIN

The Coronation of the Virgin on a Fourteenth Century Ivory.—In *Proc. Soc. Ant.* XXX, 1918, pp. 239–241 Lieut.-Col. CROFT LYONS publishes an ivory carving of the fourteenth century about $4\frac{1}{2}$ inches high and $3\frac{3}{4}$ inches wide said to have been found in the ruins of Hastings Castle. There is a group of ten figures beneath a canopy. The subject is the Coronation of the Virgin.

An Enameled Lid.—In *Proc. Soc. Ant.* XXX, 1918, pp. 92–97 (fig.) Miss JOAN EVANS discusses the enameled lid of a nautilus cup in the possession of All Souls College, Oxford. It dates from the end of the thirteenth century.

The First Cathedral Church of Canterbury.—In *Proc. Soc. Ant.* XXX, 1918, pp. 136–156 (6 fig.) W. ST. JOHN HOPE discusses the plan and arrangement of the first cathedral church at Canterbury.

RENAISSANCE ART

ITALY

St. Jerome by Masolino.—A painting of St. Jerome in the collection of Professor Frank J. Mather, Jr., Princeton, N. J., is attributed by R. OFFNER,

Art in America, VIII, 1920, pp. 68-76 (pl.), to Masolino on the basis of its style and its relationship to other works by that artist. It seems to belong to the period between 1423 and 1426 and was probably painted on the occasion of the birth of a son to the family whose stemmi appear on the picture.

Piero di Cosimo.—Two little known tondos in Sweden by Piero di Cosimo are studied by T. BORENIUS in *Burl. Mag.* XXXVI, 1920, pp. 103-104 (2 pls.) One of these, the Virgin and Child, is in the possession of Dr. Osvald Sirén; the other, the Virgin and Child with St. John, is in the National Museum, Stockholm.

Lorenzo di Niccolò.—A most characteristic work by Lorenzo di Niccolò, S. Giovanni Gualberto and his enemy before the Crucifix in S. Miniato, recently acquired by Mr. Raymond Wyer, is published by O. SIRÉN in *Burl. Mag.* XXXVI, 1920, pp. 72-78 (2 pls.). The date of the work probably lies in the first decade of the fifteenth century. A bibliography of the artist is appended to the article.

Auto-Ritratti of Francia.—In *Art in America*, VIII, 1920, pp. 167-172 (pl.), E. E. C. JAMES calls attention to the self-portraits of Francesco Francia, which are represented by a painting sold at Christie's in 1911 and one in the collection of G. L. Koppel, Berlin.

Gallows-Studies by Pisanello.—In *Burl. Mag.* XXXVI, 1920, pp. 305-309 (pl.), G. H. HILL writes on the various studies by Pisanello of hanging corpses. These appear in Pisanello's fresco of St. George in S. Anastasia, Verona, and in two drawings, one in the British Museum, the other recently acquired by Mr. Henry Oppenheimer from the sale of the Marquis of Lansdowne's drawings.

Pisanello Drawings.—In *L'Arte*, XXIII, 1920, pp. 5-23 (10 figs.), M. KRASCENINNIKOVA publishes the first installment of her study of the drawings of Pisanello in the Vallardi collection of the Louvre, treating the authentic drawings in four divisions: studies for frescoes of the church of S. Anastasia, Verona; studies for frescoes of S. Giovanni Laterano; studies for medals; and sketches of figures independent of pictorial compositions or medal designs.

Antonio da Fabriano.—In *Rass. d'Arte*, XIX, 1919, pp. 201-202 (2 figs.), A. COLASANTI publishes a triptych in the municipal gallery of Gualdo Tadino which has hitherto been almost entirely unnoticed. Stylistic considerations indicate Antonio da Fabriano as its author. The subject is St. Anne teaching the Virgin to read, with two saints at the sides. The evidence of northern influence in the figures of the saints is one of the most important features of the triptych.

Priamo della Quercia.—In *Rass. d'Arte*, XIX, 1919, p. 233, documentary proof is given by M. BATTISTINI for the attribution (which was made on stylistic evidence by G. de Nicola, *ibid.* Nos. 5 and 6, 1918) of the painting of S. Antonio enthroned, with other saints, in S. Antonio, Volterra, to Priamo della Quercia.

Guido Mazzoni.—In *Rass. d'Arte*, XIX, 1919, pp. 231-232, new documents that concern Guido Mazzoni are given, and more promised in a forthcoming book, by G. BERTONI and E. P. VICINI.

Frescoes of the Trinci Palace at Foligno.—A description of the fragmentary paintings in the Trinci Palace at Foligno, with a study of their origins and style, is given by M. SALMI in *Boll. Arte*, XIII, 1919, pp. 139-180 (18 figs.). The decorations are confined principally to three compartments: the loggia

with the story of Romulus and Remus, the room of the Liberal Arts and the Planets, and the hall of the Giants. The hands of three distinct artists, each of whom may have had assistants, are clearly recognized in the frescoes. The first, with a local training, knew the art of Gentile da Fabriano; the second united with the training he got as collaborator and, possibly, pupil of the first, the influence of French miniature painting; the third, while showing some affinity to the other two, followed closely Ottaviano Nelli. The name of the first, only, can be safely conjectured. He is the same as the author of frescoes in the church of Pietrarossa and is probably to be identified as Giovanni di Corraduccio. Verses which appear below the episodes on the walls are appended to the discussion.

Italian Paintings in France.—In *Rass. d'Arte*, XIX, 1919, pp. 157–167 (14 figs.) P. BAUTIER writes on paintings belonging to towns in the invaded part of France, especially to the Douai and Valenciennes museums, which were taken to Brussels for protection before the close of the war.

The Vivarini.—In *L'Arte*, XXII, 1919, pp. 226–227 (fig.), A. VENTURI publishes a polyptych in the convent of Sant' Eufemia in the island of Arbe which gives an example of the collaboration of Antonio and Bartolomeo Vivarini, by whom it is signed. It is similar to their polyptych in the Bologna picture gallery, but shows a later step, in which Bartolomeo is more independent of his brother and in which the movement of the figures has become freer.

Portraits by Tintoretto.—A study of some of Tintoretto's portraits is published by D. v. Hadeln in *Jb. Preuss. Kunsts.* XLI, 1920, pp. 32–45 (7 figs.). Two of these, the portrait of Giovanni Paola Cornaro in Ghent and the portrait of Ottavio de Strada in Stargard are dated, the former in 1561, the latter in 1567; and a third picture, the self-portrait in the Louvre, is substantially dated by the engravings made after it by Giesbert van Veen, which represents the painter in the year 1588.

Della Robbia Documents.—In *L'Arte*, XXII, 1919, pp. 105–112 and 242–248 (fig.), R. G. MATHER publishes his second and third series of new documents concerning the Della Robbia, with a facsimile reproduction of a manuscript with the handwriting of Andrea della Robbia and his signature. This document is of further interest in that it contains the names written by Andrea of famous contemporaries, such as Cosimo Roselli, Antonio Pollaiuolo, and Verrocchio.

Raphael Documents.—In *L'Arte*, XXII, 1919, pp. 197–200 (fig.), A. VENTURI gives, besides a list of new documents relating to Raphael, a résumé of those previously published and reproduces in facsimile the most precious document written by Raphael, a letter to his uncle, Simone Ciarla, April 21, 1508. This is now in the Vatican Library.

Raphael and Dante.—Raphael's interpretation of Dante in his paintings and his assimilation of the poet's creations to his own characteristics and those borrowed from other sources are discussed by O. FISCHER in *Jb. Preuss. Kunsts.* XLI, 1920, pp. 83–102 (12 figs.). The earliest painting based on Dante is the St. Michael in the Louvre. Later, Dante was the painter's guide in the composition of the Disputa and in the designs for the dome of the Chigi chapel in S. Maria del Popolo.

The Birthday of Raphael.—In *L'Arte*, XXIII, 1920, pp. 1–4 (fig.), A. ZAZZARETTA attempts to settle the dispute in regard to the date of the birth of Raphael, which has been held by some to be the 28th of March, by others

the 6th of April, 1483. An exact interpretation of the Bembo epitaph in the Pantheon indicates clearly that April 6th was the date of the birth and that Raphael was precisely thirty seven years old when he died.

Veronese's Color.—The chromatic scale of Paolo Veronese and his modern manner of combining contrasting colors are discussed by E. TEA in *L'Arte*, XXIII, 1920, pp. 59-75 (9 figs.).

Frescoes of S. Maria in Trastevere.—In *L'Arte*, XXIII, 1920, pp. 49-58 (8 figs.), L. LOPRESTI writes an appreciation of the work of Pasquale Cati da Jesi. He has not been much praised by critics that have mentioned him, but his paintings in S. Maria in Trastevere, which emulate Michelangelo in the painting of the architectural setting and the general treatment of the vault, have much of real merit in them.

Jacopo Ripanda.—In *L'Arte*, XXIII, 1920, pp. 27-48 (20 figs.), G. FIOCCO calls attention to the forgotten Bolognese painter, Jacopo Ripanda, one of the disciples of Francia and Costa. He enjoyed great popularity in the early years of the sixteenth century and exercised not a little influence on his contemporaries. His connection with Marcantonio Raimondi is especially close. Jacopo was primarily a painter of triumphs, as the paintings of scenes from the Punic Wars in the Palazzo dei Conservatori, Rome, testify.

The Capitoline Wolf.—In *L'Arte*, XXII, 1919, pp. 133-135 (fig.), A. VENTURI gives stylistic evidence for the authorship of the bronze figures of Romulus and Remus under the Lateran wolf, which was one of the objects procured by Sixtus IV for the collection of antiquities in the Palazzo dei Conservatori. The anatomical treatment of the twins, the elastic tension of their bodies, mark them clearly as creations of the hand of Antonio Pollajuolo.

Antonio Pollajuolo and Ancient Ceramics.—In *Art Bulletin*, II, 1919, pp. 78-86 (5 pls.), F. R. SHAPLEY points out characteristics in the work of Antonio Pollajuolo which indicate that he was familiar with and was largely influenced by designs on Greek and Arretine pottery.

Florentine Furniture Panels.—In *Art in America*, VIII, 1920, pp. 148-159 (3 pls.) F. J. MATHER, Jr., writes on three Florentine furniture panels. Stylistic evidence is offered for the attribution of the Medici *desco* in the New York Historical Society to the *bottega* of Domenico Veneziano. A chest-front in the Stibbert Museum, Florence, representing the legend of Trajan and the Widow, is here published for the first time and attributed to Castagno (or possibly his school) as a work of about 1460. Finally, a cassone panel in the Holden collection, Cleveland Museum of Art, which gives a lively picture of a horse race, is considered to be the work of the school of Uccello, as it was formerly labelled.

Alla Porcellana Pottery.—In *Faenza*, VII, 1919, pp. 49-59 (7 pls.), G. BALLARDINI discusses the origin of the designs on a certain kind of Italian pottery of the sixteenth century called *alla porcellana* because of the resemblance of a peculiar floral design that always forms part of its decoration to the flower of which the botanical name is *porcellana*. Chinese and Persian types of ships, birds, human heads, etc., that are used in conjunction with this design indicate an oriental origin for it.

Sixteenth Century Majolica Clay.—Count Francesco Caldagno, in his report to the Doge of Venice in 1598 concerning some disputed territory, mentions the excellent earth of Tretto which he says gave the white quality to the

fine majolica of Faenza; this is what is now known commercially as "terra di Vicenza." (G. Cibir, *Faenza*, VII, 1919, p. 20.)

Was Majolica made in Arezzo?—In *Faenza*, VII, 1919, pp. 33-41, A. DEL VITA answers the arguments which U. Pasqui has brought forward to prove that majolica was not made in Arezzo. That the Arezzo potters made only poorer grades of ceramics and that the examples of majolica found there in abundance all originated in other cities are assertions which the present writer seeks to disprove.

Piccolpasso.—In *Faenza*, VII, 1919, pp. 25-29, A. VAN DE PUT gives the results of an examination of the original manuscript of the "arte del vasaio" by Piccolpasso, pointing out the peculiarities in the composition of the manuscript and the slight additions that have been made by a later hand.

Sicilian Monuments.—In *L'Arte*, XXII, 1919, pp. 211-218 (9 figs.), E. MAUCERI publishes early monuments in S. Lucia del Mela and in Girgenti. In the former the two oldest remains are the Castello, of which only the tower and fragments of the enclosure still stand, and the church of the Annunziata, with its fourteenth century campanile and fifteenth century paintings. The cathedral of S. Lucia was restored in the eighteenth century but retains its beautiful fifteenth century doorway and its Madonna by Antonello Gagini, with other sculptures of the fifteenth and sixteenth centuries. The monument to De Marino is one of the most interesting objects of the fifteenth century in Girgenti. It is the work of Giovanni Gagini and Andrea Mancino.

Sicilian Art of the Renaissance.—In *Rass. d'Arte*, XIX, 1919, pp. 210-222 (14 figs.) E. MAUCERI discusses the political conditions in Sicily in the period of the Renaissance and the origins and development of its architecture, sculpture, and painting. Architecture in Sicily, deriving from Romanesque, Byzantine, and Arabic sources, maintained quite consistent characteristics through the fourteenth, fifteenth, and sixteenth centuries, not even feeling the influence of Bramante. Sculpture was early subjected to Pisan and Sienese influence, and the two great figures of the Renaissance, Domenico Gagini and Francesco Laurana, were both inspired by Tuscan grace. Early Sicilian painting, so little known to art students, shows a combination of Arabic and Tuscan features.

A Sardinian Painting.—In *L'Arte*, XXII, 1919, pp. 232-242 (4 figs.), E. BRUNELLI shows that the painting of a Madonna in the Birmingham gallery attributed by A. B. Chamberlain in 1909 to Bartolomé Bermejo is the work of a Sardinian artist. It shows a peculiar mixture of Spanish, Southern French, and Italian characteristics, with a predominance of the influence of Antonello da Messina, that is characteristic of Sardinian painting in the early sixteenth century. It is by the same hand as a number of known paintings in Sardinia, notably the Madonna enthroned in the cathedral of Castelsardo.

SPAIN

"Miraflores de la Sierra."—A town in the province of Madrid, which changed its name in 1627 from Porquerizas to Miraflores, is the subject of a study by F. P. MINGUEZ in *B. Soc. Esp.* XXVIII, 1920, pp. 5-23 (3 pls.). The treasures of the parochial church are specially noteworthy; they include sculptures and paintings for which documents furnish exact dates in the sixteenth century and later.

The Palace of Cervellón.—In *B. Soc. Esp.* XXVII, 1919, pp. 172-179 (4 pls.) A. V. Y GOLDONI reproduces among other things in the art collection of the palace of Cervellón a beautiful Gothic tapestry, a drawing attributed to Murillo, and some sixteenth century ceramics.

Palace of the Dukes of Medinaceli.—Paintings by Luca Giordano and Murillo, a tapestry signed by David Teniers, and important pieces of fifteenth and sixteenth century armor are among the objects of art in the palace of the dukes of Medinaceli described by J. M. DUSMET Y ALONSO in *B. Soc. Esp.* XXVIII, 1920, pp. 49-56 (4 pls.)

FRANCE

The Bust of a Bishop.—The bust of a bishop in the Walters collection, Baltimore, is attributed by C. R. MOREY in *Art in America*, VIII, 1920, pp. 51-58 (pl.) to the early period of the Champagne school, before it gave way entirely to Italian taste. Its relationship is so close to the statues of the Tomb of Saint-Remi, Reims, as to localize it in the same atelier and give it approximately the date of that monument, 1533-1537. Indeed, it seems likely that the Walters bust is a fragment of one of the original statues of the monument and that a nineteenth century copy now takes its place there.

BELGIUM AND HOLLAND

The Tapestries of the "Chasses de Maximilien."—In an extensive study of the sixteenth century Flemish tapestries in the Louvre known as the "Chasses de Maximilien" and representing hunting scenes in the various months of the year, P. ALFASSA (*Gaz. B.-A.* I, 1920, pp. 126-140 and 233-256; 2 pls.; 12 figs.) traces their history and shows their relation not only to painting in general of their time, but especially to landscape painting.

A Flemish Tapestry.—In *Art in America*, VIII, 1920, pp. 47-51 (pl.) S. RUBENSTEIN publishes a Flemish tapestry in the collection of Mr. Alexander Hamilton Rice, which may be dated, from the style of the costumes and of the composition as a whole, in about 1510, just at the transition between the Gothic and Renaissance periods. Comparison with tapestries signed by Jean de Rome suggests that he may be the originator of this design of a hunting scene.

Cornelis Vroom.—A landscape signed by an important predecessor of Jacob Ruisdael, Cornelius Vroom, is published by A. BREDIUS in *Burl. Mag.* XXXV, 1919, p. 261 (pl.). It is in the collection of Mr. Robert C. Witt.

Rembrandt and Contemporary Humanists.—In *Jb. Preuss. Kunsts.* XLI, 1920, pp. 46-81 (pl.; 3 figs.), H. KAUFFMAN publishes a study of Rembrandt's painting in the light of the humanistic poetry of his time, explains the sudden change in the subject matter of the artist's paintings when he went to Amsterdam, and the peculiar nature of that subject matter in the Amsterdam period. In Amsterdam Rembrandt was associated with a circle of humanistic scholars and poets, and his biblical and mythological pictures are clearly the pictorial expression of their versions of the Old Testament and the Classics, rather than of the originals. The *Trouwing* of Jacob Cats, especially, explains Rembrandt's attitude toward the various Biblical and mythological subjects which he represents.

GREAT BRITAIN

Ancient English Wall Paintings.—In *Burl. Mag.* XXXV, 1919, pp. 246–252 and XXXVI, 1920, pp. 84–87 (2 pls.; fig.) P. TURPIN publishes some wall-paintings uncovered several years ago in the Charterhouse, Coventry dating from the fifteenth and sixteenth centuries. They are in a very fragmentary state, a detail of the later painting now appearing in the middle of the earlier. What remains is part of a fifteenth century crucifixion with other figures, and part of a middle sixteenth century decorative, ornamental and heraldic design.

AMERICAN ARCHAEOLOGY

GENERAL AND MISCELLANEOUS

Village Sites East of the Mississippi.—In *Bulletin 69* of the Bureau of American Ethnology DAVID I. BUSHNELL, Jr., publishes an account of the inhabitants of the eastern United States at the time of the discovery of America and then discusses villages and village sites. He shows by abundant quotations from old documents the character of the buildings in the villages of different Indian tribes. [*Native Villages and Village Sites East of the Mississippi*. (Bureau of American Ethnology, Bulletin 69.) Washington, 1919, Government Printing Office. 111 pp.; 17 pls.; 12 figs. 8 vo.]

Ojibway Buildings.—In the *Annual Report* of the Smithsonian Institution for 1917, pp. 609–617 (pls.) DAVID I. BUSHNELL, Jr. describes dwellings and other structures of the Ojibway Indians. The dome-shaped wigwam was the common type of dwelling. Illustrations of this, and of the conical wigwam, as well as of other buildings are given from photographs made in northern Minnesota.

The Iroquois Indians.—In the *Thirty-first Annual Archaeological Report* of the Ontario Provincial Museum, 1919, pp. 9–55 (9 figs.) R. B. ORR gives a general account of the Iroquois Indians, their history, manner of life, etc., down to the present time. He estimates that there are still living about 1700 Iroquois.

Methods of Burial among American Indians.—In the *Thirty-first Annual Archaeological Report* of the Ontario Provincial Museum, 1919, pp. 56–77 (8 figs.) C. B. ORR discusses the different methods of burial employed by the American Indians.

Mummified Jivaro Heads.—In *Mus. J.* X, 1919, pp. 173–183 (colored pl.; 2 figs.) W. C. F(ARABEE) discusses the practice among the Jivaros of South America of taking the heads of their enemies, the method by which the head is mummified and preserved, and the attendant ceremonies.

Miscellaneous Papers.—In the *Thirty-third Annual Report* of the Bureau of American Ethnology for 1911–12 (Washington, 1919) the following papers are of interest to students of American archaeology. Pp. 53–154 (32 pls.) M. R. GILMORE discusses the uses of plants by the Indians of the Missouri River region; pp. 155–206 (44 pls.; 11 figs.) E. H. MORRIS publishes a 'Preliminary Account of the Antiquities of the Region between the Mancos and La Plata Rivers in Southwestern Colorado'; pp. 207–284 (15 pls.; 101 figs.) J. WALTER FEWKES discusses the designs on prehistoric Hopi pottery.

The Tunica, Chitimacha and Atakapa Languages.—JOHN R. SWANTON has published a study of three little known American languages, the Tunica, Chitimacha and Atakapa, once spoken in parts of Mississippi, Louisiana and Texas. All the available material from old documents is summarized, and comparative vocabularies published. The study is philological, but of interest to students of American archaeology. [*A Structural and Lexical Comparison of the Tunica, Chitimacha and Atakapa Languages.* (Bulletin 68 of the Bureau of American Ethnology.) By John R. Swinton, Washington, 1919, Government Printing Office. 56 pp. 8 vo.]

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CYLIX IN BALTIMORE: INTERIOR.



CYLIX IN BALTIMORE: EXTERIOR, A.



CYLIX IN BALTIMORE: EXTERIOR, B.

A CYLIX IN THE STYLE OF DURIS¹

[PLATES I-III]

SOME years ago I procured in Naples a cylix in the severe red-figured style which was said to have been found in the region of Capua. It seemed to be intact (Figs. 1 and 2) but after a thorough cleaning with alcohol I found that it was made up of many frag-



FIGURE 1.—CYLIX IN BALTIMORE, BEFORE CLEANING: INTERIOR.

ments, ancient and modern. Modern pieces of coarse red brick clay had been used to complete the vase and on these the scenes had been restored with a red and a black paint which resembled very closely the ancient paint. To make the work more deceptive and to leave no traces of the restoration all the ancient parts with black and red were repainted with the same modern black and

¹ I recognized that the cylix was in the style of Duris some years ago and showed it to Mr. J. D. Beazley who agreed with me. Cf. *A. J. A.* XXI, 1917, p. 87; Beazley, *Attic Red-Figured Vases in American Museums*, p. 99; Hoppin, *A Handbook of Attic Red-Figured Vases*, I, p. 278, No. 47. For literature on Duris cf. Hoppin, *op. cit.* pp. 208 ff.; *J. H. S.* XXXIX, 1919, pp. 85 ff.

red. In one or two cases this was incorrectly done, but on the whole the cylix had been so beautifully repainted that at first sight it seemed to be perfectly preserved except where a wooden peg held the perpendicular part of the foot together. The cleaning revealed, however, that nearly all of the ancient drawing on the interior and on one exterior side was preserved and that on the other exterior side, where most of the restoration had been made, enough was left to leave no doubt of the number of figures and their general attitudes except in the case of the standing draped youth holding the oenochoe who was incorrectly restored, as we



FIGURE 2.—CYLIX IN BALTIMORE, BEFORE CLEANING: EXTERIOR.

shall see. The inscription on the interior had been repainted as *ἡ παῖς καλός*, which also aroused my suspicion. After cleaning, part of the scene on the side less well preserved was seen to be gray instead of red as before cleaning (the gray piece includes the upper part of the couch to the left and what is preserved of the man and the lower part of the lady on the next couch). This is probably due to the fact that the vase was perhaps thrown into the fire in connection with the burial rites and when the cylix was broken, certain pieces of red clay had their color changed to gray through the action of fire, while most of the pieces and even the red on the shoe and table and the leg of the couch on the lower part of this fragment were unaffected. That the vase was broken in some way in antiquity is proved by the fact that the

gray color ends at the joints of the ancient piece (cf. the same thing on a cylix by Duris in Boston, published by Tarbell in *A. J. A.* IV, 1900, pp. 183 ff.). It is impossible to say how many later breakages there have been.

The cylix is of the usual form of the period and resembles with its beautiful curves from the foot into the sides of the vase many of the signed vases of Duris.¹ The height is 0.12 m. or $4\frac{3}{4}$ in.; the diameter, 0.32 m. or $12\frac{1}{2}$ in.²

As is almost always the case with Duris's signed cylices,³ his composition is synthetic and the designs on the inside and outside are closely connected. On the interior and exterior the scenes are all similar and taken from the banquet. There are five scenes of a bearded man and woman reclining on a couch with a table in front, beneath which is placed in every case a pair of shoes.⁴ In the case of the Berlin signed cylix (*Arch. Zeit.* XLI, 1883, pl. 4)⁵ a similar scene occurs on the interior, but not on the exterior. On the British Museum signed cylix (E 49)⁶ are banquet scenes on the outside only, and on a cylix in the style of Duris in Florence we have a banquet scene on both interior and exterior.⁷ In the case of a cylix in the style of Duris in Munich⁸ the banquet scene is on the inside only. This subject often occurs on Greek vases, though not with the details or luxuriousness pictured in the symposia of Xenophon and Plato. There is a good detailed discussion of the art-motives of the symposium

¹ Some such as Perrot et Chipiez, *Histoire de l'Art*, X, p. 531, fig. 299 are different, but fig. 300 is similar.

² The vase of Duris published by Tarbell *A. J. A.* IV, 1900, pp. 183 ff. is $4\frac{3}{4}$ in. in height, and $12\frac{1}{4}$ in. in diameter.

³ Tarbell, *op. cit.* p. 186, says that this is not the case on his later unsigned ones and yet Beazley, *loc. cit.* classes our vase with the last, the senile phase of Duris.

⁴ In Furtwängler, *Sammlung Somzée*, p. 96, pl. XXXVII is a similar unsigned cylix (now in Brussels) with a man and woman reclining on each of two couches on either exterior side. There are tables in front of the couches and a boy with an oenochoe in the middle of both sides. Baskets and cylices hang on the wall, but there are no shoes under the tables and there is a meander and star border on the outside instead of the single line which occurs on our vase. I am inclined to think that this cylix also, though not mentioned by Beazley or Hopkin, is in the style of Duris.

⁵ Beazley, *op. cit.* p. 98, note 1 says that the signature is a forgery, but Hopkin includes it among the signed vases (*op. cit.* I, p. 216).

⁶ Hopkin, *op. cit.* I, p. 240.

⁷ Cf. Jacobsthal, *Göttinger Vasen*, p. 58.

⁸ Furtwängler-Reichhold, *Griech. Vasenm.* pl. 105.

(συμποσιακά) by Jacobsthal in the Appendix to his *Göttinger Vasen* (*Abhandlungen der königlichen Gesellschaft der Wissenschaften zu Göttingen, phil. hist. Kl. XIV*, 1913, pp. 33-76)¹ and by Studniczka in his *Das Symposion Ptolemaios II.* (*Abh. Sächs. Ges. XXX*, 1914, No. II.) In the interior (PLATE I)² the upper part of the man's head and the right hand and wrist of the woman and the top of the flute case are missing but easily restored.² The hand of the woman is restored as it was on the repainted vase and to correspond to the gesture of one of the men on the outside. She is reclining in a half-seated posture with left elbow resting on a double or doubled over cushion³ decorated with broad and narrow black bands and a tassel at the ends. She is clothed in a linen chiton under which her right breast is indicated and in a himation which comes over her left shoulder and arm and falls down between her body and arm over the edge of the couch. The other end is arranged in broad folds across her lap and legs and falls in three folds over the lower end of the couch (just as in Furtwängler-Reichhold, *op. cit.* pl. 105). Her right knee is raised considerably and her right foot cut off by the border as often in such figures on vases signed by Duris and in his style; and her left leg is bent back at the knee and cannot be traced further. The position of the legs is almost identical with those of the woman on the inside of the signed vase in Berlin (Hoppin, *op. cit.* I, p. 217). She holds no vase in her left hand as all four women on the exterior do, or did. She wears a wreath about her hair which is solid black above, but with characteristic Durian relief lines in the black below the wreath. Her eye has the pupil and iris indicated by a dot and circle and her head is turned and inclined downward toward the man at the right. The man is clad only in a himation, which falls over his lap and is brought around his back behind his left shoulder, but not over it, somewhat as in the case of the female figure on the inside of the signed

¹ Such symposiac scenes are frequent on vases and Etruscan wall-paintings and are found even on the Arretine vases (not mentioned by Jacobsthal). Cf. Chase, *Loeb Collection*, pl. IV; *Boston Museum, Cat. of Arretine Pottery*, pp. 57-59, pls. XII-XIII; Miss Richter, *Handbook of Class. Coll. Metropolitan Mus.* p. 193.

² I am indebted for the drawings in Plates I-III to Miss M. Louise Baker of Philadelphia. I have gone over every detail with her and while some changes have been made and one or two things are uncertain, the drawings give an excellent idea of the scenes on the vase itself.

³ Cf. Perrot, *op. cit.* X, p. 530, fig. 298; *A. J. A.* XX, 1916, p. 331, fig. 13.

vase in Berlin (Hoppin, *op. cit.* p. 217). The other end falls across his left arm below the elbow down to the wrist. His breast and shoulders and right arm are nude. He has a beard quite similar to that which is often found on vases of Duris and his hair is done up in a sort of *crobylus* at the rear. He undoubtedly wore a fillet as the other men on the exterior of the vase do, and his hair and eye have been restored from the male heads preserved on the exterior. He holds in his left hand the double flute, whereas the very similar figure (cf. the pectoral muscles and right arm) on the signed vase in Berlin holds one flute in his left hand and raises the other flute with his right to his mouth. On our vase the right arm also is raised and bent at the elbow, but the right hand is empty and turned back so as nearly to touch the head. This is probably a gesture of conversation¹ (note the open mouth) such as we have in the case of the first bearded figure to the left on one side of the exterior of one of the signed Duris vases in Berlin (Hoppin, *op. cit.* I, p. 217). It may be a slight variation of the singing gesture, where the right hand is placed on the head as in the case of one of the female figures on the exterior. The man rests his left elbow also on a pillow doubled over above the top of the couch which here as in the other five couches on the exterior has a head-piece consisting of the halves of two double volutes (hardly of the type known as Ionic) with a sort of abacus above.² The couch is different from couches on vases of Duris in this respect, but Duris liked variety. It is similar to the couch with volutes on the cylix in Munich in the style of Duris (Furtwängler-Reichhold, *op. cit.* pl. 105). In front of the couch is a three legged table or *τρίπους* such as we know the Greeks used,³ with a leg at each side of the top and one in the middle of the bottom. The front upper leg, which is the only one visible, cuts into the border so that we cannot tell how it terminated and whether it had clawfeet at the end, as so often was the case. Probably the painter intended the legs to be plain. Otherwise he would have indicated the claws in the case of the bottom leg of the table as is done in the vase in Furtwängler-Reichhold, *op. cit.* pl. 105 and on the vase

¹ The gesture occurs even in the fresco from the Corneto tomb of the triclinium pictured in Martha, *L'Art Étrusque*, p. 385. See Jacobsthal, *op. cit.* p. 66.

² Cf. Miss Ransom, *Couches and Beds of the Greeks, Etruscans and Romans*, pp. 80 f.; Puchstein, *Das Ionische Capitell*, p. 56.

³ Blümner, *Arch. Zeit.* XLII, 1884, pp. 179 ff.; 285; XLIII, 1885, p. 287.

in Berlin already cited. Under the table, as in the four other cases, appear two shoes with turned over tops and long pointed toes such as we see on Ionic and Etruscan monuments¹ and which survive today in Greece in the red boots called *τσαρούχια*. Under the shoes there is an empty exergue as often on vases of Duris. In the background the only indication of the wall of the banquet hall is the picnic-basket which is suspended by two strings tied in a bow. Other strings are indicated on the outside of the basket and three strings hang in a sort of tassel from three parts of the bottom of the basket. Three similar baskets are represented on each exterior side and all are almost identical, though the number of horizontal lines varies in different cases. This kind of basket was called *σπυρίς* in ancient times and is still in use in Greece for carrying marketing and all sorts of things (*ζεμπίλι*). It is even used at excavations for hauling earth to the dump carts and also for storing things.² At the extreme left hangs a flute case or *συνθήνη* stitched down the middle so as to have a section for each of the two flutes and a special piece attached to the side for the mouth-piece. A flute case occurs in a similar position in Furtwängler-Reichhold, *op. cit.* pl. 105 and A. J. A. XX, 1916, p. 331. Above the basket are the letters ΠΑΙΣΚ, which must be restored as *ὁ παῖς καλός* and not *ἡ παῖς καλός* as the Italian restorer had completed it.³ The whole design is surrounded by a pattern consisting of two meander squares in opposite directions separated by "red-cross squares."⁴ These meander squares vary and there are at least five cases where the cross becomes an X. It is interesting to see that the painter was not successful in making both ends of the pattern

¹ Cf. Pottier, *Louvre Album*, pl. 98, G 81; Furtwängler-Reichhold, *op. cit.* I, p. 96, pl. 21; *Antike Denkmäler* II, pl. 41; *Arch. Zeit.* XLI, 1883, pl. 17; Gerhard, *Etr. Spiegel*, pl. 81, 2; Behn, *Die Ficoronische Cista*, p. 30. Such shoes occur resting on a support under a table in front of a couch on a "Cyrenaic" cylix representing a symposium in the Musée du Cinquantenaire at Brussels. I cannot find the vase illustrated or mentioned in the publications on Cyrenaic vases.

² Cf. also Hartwig, *Die Gr. Meisterschalen*, pl. XIV and Jacobsthal, *op. cit.* p. 51.

³ On only four signed vases out of forty (Hoppin, *op. cit.* I, pp. 254, 266, 269, 274) do we have *ὁ παῖς καλός*. On other signed vases Panaetius, Chaerestratus, Aristagoras, Hermogenes, and Hippodamas occur as *καλός* names. On the unsigned vases *ὁ παῖς καλός* or simply *καλός* is frequent (cf. Hoppin, *op. cit.* I, pp. 276-290; II, pp. 490-492).

⁴ Cf. Murray, *Designs from Greek Vases in the British Museum*, pl. IX.

meet, as on the signed vase illustrated in Hoppin, *op. cit.* I, p. 245 (cf. Murray, *op. cit.* Figs. 32, 33, 34). He had to curtail part of a cross square (in the middle below the shoes), and to use only a single meander square in one case.¹ The pattern is almost identical with that on the cylix in Munich in the style of Duris (cited above) and reminds one of the similar pattern of single meander squares and crosses which was so usual with Duris in his later period (cf. Tarbell, *op. cit.* p. 187; Hoppin, *op. cit.* I, pp. 217, 219, 230, 241, 245, 261, etc.). When the interior scene is compared with that on the signed vase in Berlin which has a similar subject, great resemblances appear, some of which I have already pointed out, but the scenes are far from being exact duplicates, and this very fact is characteristic of Duris, to repeat similar motives but with enough variation in details to avoid dry monotony and to present a life-like and interesting painting (cf. for example *Arch. Zeit.* XLI, 1883, p. 23). So here the meander-star border is different, though similar. The himation on the man on our vase resembles that on the woman on the signed vase. The pillows, couch, and table, and the flutes are similar, but different. In our case the woman's hands are empty, on the Berlin vase one has castanets, the other a cylix. I have already spoken of the difference in the flutes, and I might call attention to the fact that the shoes are turned in the opposite direction, and to the difference in the heads of the women, but to my mind these differences only make it more certain, in view of what we know of Duris's fondness for variety in similar themes, that our vase is also by Duris.

Let us now turn to the exterior scenes. On the best preserved side (PLATE II) are six figures and two couches of the same type as on the inside with a three legged table in front of each. This is a subject hardly suited even to the interior of a cylix, but much less so to the exterior. Notice how each foot of the first couch to the left and the top foot of the other couch are not continued to the circular line bounding the scene as on the interior, but a kind of triangular piece is left in the color of the clay to form a straight line to represent the floor on which the legs can stand. The bottom of the lower leg of the couch to the right, which is drawn

¹ This is to the left just below the lower end of the couch. The Italian restorer had repainted the next cross above as a meander, thus bringing four meanders together. Cf. Fig. 1. On the fragment in Hoppin, *op. cit.* p. 261 a "cross square" is omitted entirely between two meanders.

behind the other, is concealed behind one of the shoes under the first table, and the lower leg of the table in front of the couch to the left is not visible at all, thought of perhaps as concealed behind the flute-player's right leg. The upper leg ends behind the right foot of the nude youth as does also the lower leg of the table to the right, which is here drawn, but not in the similar scene on the other exterior side. Under each table is a pair of shoes turned in opposite directions. On the other side the shoes are turned in the same direction. On the first couch to the left are a lady and a man in the usual order which puts the man nearer the head. The lady is clad in a short-sleeved linen chiton of fine folds which shows the form of the breasts as is usual at this period (cf. Hoppin, *op. cit.* I, p. 217). She also wears the himation which is brought around her back and over her left shoulder and entirely outside and under her left arm instead of being brought inside the arm above the elbow as in the case of the other female figure on this side and on the inside. She raises her right leg and her chiton shows below the himation, and her bare right foot is exposed beneath the chiton and projects beyond the foot of the couch. She rests her left elbow on a double cushion and in her left hand holds a cylix with off-set lip and places her right on her head which is covered with a hood, as in Hoppin, *op. cit.* I, p. 217, in front of which her hair hangs down in the characteristic relief lines. In front of the couch toward the lower end and in front of the lower end of the table stands to the right a fairly tall youth with slender head somewhat like the youth on one of the signed vases of Duris in Vienna (Furtwängler-Reichhold, *op. cit.* pl. 54). He is clad only in a himation with folds which fall quite in the style of Duris. The right shoulder is bare and the drapery shows the rear line of the body and of the right leg. The boy wears a purple fillet over his hair which is done below the fillet as usual on this vase (also a characteristic of Duris) in relief lines, and he is blowing the double flute held delicately in his dainty fingers (no *phorbeia*). This group is very closely paralleled by the similar scene on the interior of the cylix in Munich in the style of Duris. The flute-player though taller is almost identical with that on our vase in pose,¹ in the arrangement of the himation, in the position of his arms and flute, in his hair, in his fingers, etc. On the Munich cylix there is the same kind of couch with volutes on the head-piece as on our vase, the same kind of

¹ For a figure, somewhat similar, cf. *Mon. Ined.* I, pl. 32.

double meander and star pattern and cushion and shoes, as on the inside of our vase, also the same method of bringing the himation behind the left shoulder without really covering it, the same way of letting the himation fall over the side of the couch near the bottom as on the inside of our vase. The main difference is that on the Munich cylix the reclining figure putting his right hand to his head is male, and on our vase a woman is making this gesture which is here undoubtedly that of a singer, and is a frequent gesture today of yodling Swiss shepherds and of singers in Italy and other southern lands.¹

In the case of the Munich vase the words οὐ δύναμι' οὐ which help us correct the text in Theognis 695 or 939 are proceeding from the mouth of the man (cf. *Ath. Mitt.* IX, 1884, pl. I; Baumeister, *Denkmäler* p. 1984; also Studniczka, *op. cit.* pp. 124 f. where there is a flute-girl and a reclining figure with similar gesture). The Munich cylix and our cylix probably come from the same hand and are another illustration of Duris's fondness for repeating the same motive but with ever varying details. To come back to our vase, the next figure to the right is a bearded man reclining with his left elbow supported against a cushion, which is visible above the head-piece of the couch below the outstretched right hand of the nude boy. It is thought of probably as concealing the usual tassel end, but in any case the cushion seems to be single here as in the case of the other man on this side of the vase, and in that of one of the men on the other exterior side, the other man there having a double cushion, another instance of

¹ Cf. Furtwängler-Reichhold, *op. cit.* text to pl. 105, Studniczka, *op. cit.* p. 125 and Jacobsthal, *op. cit.* pp. 59, 60 n. 1, 62; cf. also the similar gesture on a vase by Smikros in Brussels, on a red-figured crater in Corneto with banquet scene (Jacobsthal, *op. cit.* p. 52); Furtwängler-Reichhold, *op. cit.* pl. 73; on a vase signed by Duris belonging to Theodore Reinach in Paris (Hartwig, *op. cit.* p. 620 and pl. 67); and on the very small cylix (4.5 cm. high by 10.5 cm. in diameter) in the British Museum which Jacobsthal publishes *op. cit.* pl. 22, which is probably a Boeotian imitation of an original vase by Duris. The man reclining to the left is playing the double flute while the man to the right with right hand on his head is singing ὦ διὰ τῆς θυρίδος, the beginning of a song of Praxilla cited by Hephaestion (Frag. 5 Bergk) and dating from the same time as the vase (452 B.C.).

ὦ διὰ τῶν θυρίδων καλὸν ἐμβλέποισα

παρθένη τὰν κεφαλὰν, τὰ δ' ἐνερθε νύμφα.

On the exterior we have φασιν ἀληθῇ ταῦτα. Here we have lyric poetry to the accompaniment of the flute, and elegy with the lyre, which is quite different from the literary tradition.

variety of which Duris is so fond. His hair is of the characteristic type with raised relief lines below the purple wreath which he wears, behind and also directly in front of the ear and extending down along the left edge of the beard, the rest of which, however, is smooth. A single incised line separates the smooth black of the hair above the wreath from the black background. The upper part of the face is obliterated, but the single black line extending across the upper lip to the beard as in the other cases on the vase indicates the mustache. His lips seem to be slightly parted as if he were speaking to the nude standing youth facing him to whom he stretches out his right arm at full length, supporting it with the long delicate characteristic fingers of his left hand, an awkward but vigorously rendered gesture. He is clad in a himation, which comes across his left shoulder and arm down to the elbow. The lower part of the himation is brought up over his body in a beautiful S shaped curve and falls in characteristic zigzag folds, parallel with the zigzag folds of the other end. His right shoulder and right side and breast (indicated by a curved black relief line) are nude. His attention is not at all centred on the singing girl, but on the nude boy who has in his left hand a strainer¹ with a handle which ends in a swan's head and holds out with his right hand a poorly drawn oenochoe (without mouth or handle, but see standing youth on other side). The overlapping of the bearded man's and the boy's right arms brings the two figures closer together than they really ought to be, though the placing of the boy's right foot in front of the upper leg of the table in front of the couch, counteracts this and makes it apparent that the perspective is not correctly rendered, and that the man is meant to be extending his arm, not straight to the side, but rather away from himself toward the front beyond the table to the youth, who has many of the characteristics of Greek sculpture of the period about 480. The right leg is advanced and the figure stands in profile to left, but the upper part of his body which is too narrow above the hips, is in full front view and both breasts show completely. They have the characteristics of Duris, especially the little triangle with circle between them at the bottom which Duris often used. The head again is in profile to the left. The lips are somewhat parted. The face has a slight smile. The pupil of the eye consists of a

¹ Cf. Furtwängler-Reichhold, *op. cit.* pl. 84; Hartwig, *op. cit.* pl. XXXIV; *Mon. Ant.* IX, pl. 13, and references in *A. J. P.* XXVIII, 1907, pp. 450 f.

dotted circle (which occurs frequently on vases of Duris) and is not in full front as so often in early Greek art but is pushed toward the inner corner of the left eye. The hair is smooth above the purple fillet but has the characteristic relief lines below. The youth is a typical Duris figure such as occurs on the British Museum signed cylix,¹ where the same principle of isocephalism of which early Greek art was fond is followed and the legs of the standing boy are elongated so as to bring his head on a level with those of the reclining figures. The height of the boys on the two vases is a little more than eight times that of the head, which is about the proportion on one of the signed Vienna cylices. That on the British Museum vase is eight and one-half times. The nude figure on our vase is a little taller than the draped one. The third group of figures consists again of a man and a woman on a couch, but here they are interested in one another as on the inside of the vase. The couch is of the same form as the others except that here the eyes of the volutes are represented in solid black dots. The upper foot again rests on a sort of platform which is indicated by a bit of triangular red which has been left in order to give the couches, though resting on a curved line, the same length of leg. The lower leg of the couch is seen behind the first couch to the left and ends behind one of the shoes. This really makes five planes (second couch, table, head of first couch, table, and nude youth), and with the three baskets (also slightly differentiated by a difference in the number of surrounding black lines) hung up by purple strings tied in a bow-knot, and the two cylices on the wall (such as occur often on vases of Duris) gives a distinct impression of a banquet room and perspective, however crudely rendered. In front of the couch is a table of the form described above, but here the bottom leg is drawn. Underneath are the shoes but turned to the right. The lady is draped in the same sleeved linen chiton as the other ladies with the same characteristic groups of three lines each to represent the folds. She also wears the himation which falls over her left arm above the elbow and inside her lower arm which is bare below the elbow. The himation is also seen over her legs which have about the same position as those of the lady on the inside of the cylix. The right knee is raised and the left leg is bent back from the knee which is drawn as resting on the couch (cf. inside). The transition from the lower body in profile to the upper body in full front is

¹ Cf. Hoppin, *op. cit.* I, p. 241; Studniczka, *op. cit.* p. 140.

not well rendered but, as we have seen, it is characteristic to have the lower part of the body in profile and the upper part in full front. The left breast is distinctly indicated by a curved black relief line. On her head she wears a hood which is similar to the hood of the other lady except that it has one black relief line where the other has two. (The lady on the inside and the other outside wear wreaths.) The hair has the usual relief lines. Her eye has the circle and dot, and her lips are slightly parted. She rests her left elbow on a double cushion and holds a cylix with offset lip in her left hand as the other lady on this side does though in a slightly different position, and places her right hand on her left shoulder or nearly so. She is looking at the man who is clad only in a himation which is arranged similarly to that of the other man on this side, with the same parallel zigzag folds at the ends; but there are differences as usual on Duris's vases. The folds over his upper left arm are different and both his shoulders and breasts are nude. The arrangement of the himation behind the left shoulder which it does not cover is like that on the male figure of the interior. Only a single cushion appears above the head-piece of the couch, which here has the volutes different with the eyes indicated and a higher member between them and the abacus. The man wears a purple fillet and has the characteristic hair and beard and mustache, and eye with circle and dot. His upright open right hand is stretched out to the left behind the lady's head and has the elongated fingers which we see elsewhere on this vase. His left arm is bent at the elbow and his left hand with the palm down is bent forward toward the lady. Here again we see Duris's fondness for variety in the midst of similarity, for in the case of the similar group on the other side, the gestures are reversed and the man has his right hand on his left shoulder and the lady is probably stretching out her right.¹

Between the scenes on the two exterior sides, under and on either side of the two handles (the inside of which as well as the space between them is left in the red color of the clay), is a beautiful quadruple palmette and spiral ornament which had been repainted with an extra number of petals. The drawings indicate what is restored. The essential parts remain and show us a beau-

¹ This gesture of right hand touching, or nearly touching, left shoulder is seen on the signed cylix belonging to Théodore Reinach (Hartwig, *op. cit.* pl. 67 = Hoppin, *op. cit.* I, p. 261), on a stamnos in Munich and on the Boeotian imitation of a Duris vase (Jacobsthal, *op. cit.* p. 65 and pl. 22).

tiful pattern quite in the style of the quadruple palmette pattern which Duris drew so often on the signed vases of his second period, as Winter has shown.¹ Duris uses this kind of palmette pattern with slight variations exclusively and only he uses it. It occurs on at least seven cylices including the one in Boston published by Tarbell. The other exterior side (PLATE III) had been much repaired. The drawing shows in dotted line what is there restored, and in solid black what is on the vase after cleaning. On the couch to the left is again a reclining man and lady. Very little of the female figure is preserved. We see her bare right foot² and what may be a bit of the mattress projecting over the foot of the couch.³ The lines of the himation can be seen behind the nude boy both above and below the couch where the drapery hangs over. We see also some lines of the himation in front of the boy under his outstretched right arm and can make out some of the lines of the lady's left knee, so that by analogy with the female figure on the inside, and with one of those on the other exterior side, it is easy to restore the general position of the lady with raised right knee and with left leg bent back at the knee. She undoubtedly held a cylix, of which there are slight traces, in her left hand and her left elbow rested on the two cushions or double cushion, the upper ends of which are still preserved. What the position of the right hand was, we cannot be certain. It has been restored in the drawing as it was restored before the cleaning, but we can prove that the Italian restorer made several mistakes as in giving the wrong number of petals in repainting the quadruple palmette designs under the handles, and, perhaps, we should restore the right hand as resting on the left shoulder, a characteristic gesture occurring twice on this vase. Duris, however, was just as likely to vary his gestures as to repeat them. Of the head of the man only the top with the incised line separating his hair from the black background is preserved. We see the line of the right breast with the characteristic triangle, the lines of the himation which goes under the left arm, leaving it as well as the shoulder entirely nude. Here again is a variation, as in every other case on the vase the himation covers the man's arm above the elbow. There is only a single cushion, instead of the more usual two or double cushion, behind the man's back. Enough of

¹ *Jb. Arch. I. VII*, 1892, p. 110, fig. 13; p. 111; p. 116.

² Cf. Jacobsthal, *op. cit.* p. 50.

³ Cf. Ransom, *op. cit.* p. 45.

the cylix with offset lip is preserved in the left hand to make its restoration absolutely certain. The right arm was probably stretched out at full length in the characteristic gesture which we have restored. The couch is similar to the other couches, though above the volutes on the head-piece a kind of echinus is inserted under the abacus. Under the lower foot of the couch a slight bit of the platform is still visible. There is the usual form of table in front of the couch, but the lower leg is not drawn unless the bit of red behind the right foot of the youth is meant to indicate it as concealed behind his leg and coming to view there. In front of the lower end of the table under which are again two shoes stands a nude youth to right with left foot advanced. Part of him is missing above the knees and his shoulders and head and left arm are entirely gone. Most of his right arm is preserved and part of the object in his right hand which is probably a ladle.¹ On this side of the vase we have two groups of three persons each, whereas on the other side we have three groups of two persons each, another instance of Duris's love of variety in the midst of symmetry. There are six figures on either side as on two cylices in Munich in the style of Duris (Furtwängler-Reichhold, *op. cit.* pls. 24 and 105). On the signed vase representing a school scene, and on that with a banquet scene in Berlin (Hoppin, *op. cit.* I, pp. 215, 217) there are five figures on each side. On one of the signed vases in Vienna (Furtwängler-Reichhold, *op. cit.* pl. 54) there are seven on each side; and on the other (*op. cit.* pl. 53), seven on one side and eight on the other. On the signed British Museum cylix with banquet scenes (Hoppin, *op. cit.* I, p. 241) there are four figures on one side and five on the other (also in Hoppin, *op. cit.* I, p. 238). In Hoppin, *op. cit.* I, pp. 222, 230, 233, 237, 242, 249 there are five on each side. So that it is characteristic of Duris sometimes to have the same number on each side, but he is not consistent and varies such symmetry. In Hoppin, *op. cit.* pp. 227, 246, 250, 257, 262 there are six figures on each side as on our vase.

In the second group to the right except for the loss of the lady's hands the reclining pair is well preserved. The man has both

¹ We at first restored this object as a strainer such as the nude youth on the other side holds in his left hand and such as hangs on the oenochoe which the standing draped figure on this side holds. But the piece preserved is too long so that the object must be either a single flute (in which case the other hand should hold a flute and not an oenochoe) or a ladle such as is seen in Furtwängler-Reichhold, *op. cit.* pl. 84 and elsewhere.

shoulders and breasts and entire right arm bare but his whole left arm to his wrist is wrapped in the himation which is brought around his back over the edge of his left shoulder (somewhat as in the case of the man on the interior). He rests his left side on a double striped cushion. His left hand with elongated fingers and thumb rather awkwardly drawn is empty. His right hand is placed on his left shoulder whereas in the corresponding group on the other exterior side it is the lady who places her right hand on her left shoulder, a characteristic variation of which we have seen Duris is so fond. By analogy with that group I have restored the lady's right hand as extended to correspond with the man's outstretched right hand. The Italian restorer had placed a cylix in her right hand but the cylix should be in the other hand and not in a hand stretched out at such distance. The lady wears the usual sleeved chiton with the folds marked by groups of three fine relief lines. Behind her left shoulder and over her left arm which rests against a double plain cushion and over her lower right leg and left knee can be seen the himation. Her left hand probably held a cylix, as the line of the forearm certainly seems to warrant. She does not wear a hood on her head as the ladies on the other exterior side, but like the lady on the inside she has a broad wreath in the red color of the clay about her head; whereas the man wears a narrow purple or dark red band about his hair. In front of the table is the *παῖς οἰνοχόος* of whom are preserved only the two feet, the lower part of the himation, two or three folds of the himation at the back, and the nude right arm with the right hand holding an oenochoe with a strainer hung on its lip just beyond the handle. The Italian restorer had drawn a figure in profile (Fig. 2) but here again (as in the palmette ornament) he made a flagrant mistake. The two lines seen at the back would denote the folds of drapery as falling from the shoulder since the outside line is too high to suggest the gluteal muscles, even if the second line were absent. A sheet draped over a model secured the folds as restored, slightly conventionalized as to regularity. The position of the right hand also suggests this restoration and Duris liked to represent the back of the shoulders. The general position reminds one of the figure to the left on one of the exterior sides of the vase illustrated by Hoppin, *op. cit.* I, p. 217, and of the figure to the left on the lower exterior side of the vase illustrated by Furtwängler-Reichhold, *op. cit.* pl. 105. The boy here is draped, whereas

on the other exterior side he is nude, but the other standing figure on this side is nude. The two standing figures here (PLATE III) face in the same direction, whereas on the other side they face toward one another, with the nude one to the right, another case of variety in the midst of symmetry. We see it again in the cylices and baskets which hang on the wall. Three baskets slightly differentiated and part of one cylix and another complete cylix are preserved in the drawing. In the centre of the foot of the cylix to the right there is a solid black circle within a ring instead of a small open circle within a larger circle, as on the other side. The black relief lines also vary.

It has seemed worth while in the case of this important vase to go into some detail, as an analysis brings out many interesting features of Greek art in general, and of Greek vases of the severe red-figured style in particular, especially that of variety in the midst of symmetry and similar motives. I hope I have also demonstrated that the cylix is in the style of Duris of which there are two others in Baltimore (Hoppin, *op. cit.* I, p. 277; Beazley, *op. cit.* p. 99), the cylix with top-spinning assigned by Hartwig to the "Master with the Spray," being also Durian. Even if some one argument is doubted, the cumulative evidence is conclusive. In the case of Duris there is less doubt than with other vase-painters about an unsigned vase, since we have forty or more signed vases and his style is clearly marked. The resemblance of our cylix in style to the signed vases and to unsigned vases which have been attributed to Duris with general consent is very great. The subject, the meander and star border, the palmette pattern, the shape of the heads, the hair and beard with the relief lines, the anatomical details, the slender arms and sharp elbows, the noses and ears, the eyes drawn with circle and dot (cf. *J. H. S.* XXXIV, 1914, p. 189), the drapery, the recurrence of similar gestures, the general proportions of the figures, especially the elongated standing youths whose small heads are on a level with those of the reclining figures, the love of variety in detail in the midst of symmetrically arranged groups, but above all the resemblance in style to signed vases of Duris, make it almost certain that we have a cylix painted by Duris himself or by one of his best pupils in his second period (hardly senile as Beazley calls it) when he painted his other cylices with banquet scenes and when in the midst of a certain stiffness he exhibited not only care but a greater power of facile execution (Fowler-Wheeler, *Greek Arch-*

aeology, p. 495). Jacobsthal is inclined to date some of these vases as late as 452, but in view of the lack of true rendering of the anatomy in many cases I am not inclined to date our cylix later than 470. On the other hand I hesitate after the remarks of Hauser (text to Furtwängler-Reichhold, *op. cit.* II, p. 232) and Jacobsthal (*op. cit.* p. 63 and *passim*) to date Duris's second period as early as 480.

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DYNAMIC SYMMETRY: A CRITICISM

I

THOUGH published under university auspices and enlisting for its preparation the interest and seemingly the sympathy of the classical specialists of two of our great American museums, Mr. Hambidge's treatise on dynamic symmetry¹ has thus far elicited very little archaeological comment. Yet his theory, if true, is of fundamental importance for Greek esthetic theory and for our understanding of the relations between mathematics and artistic practice in antiquity. In certain modern circles, among lay theorists and practical designers, Mr. Hambidge is said to have succeeded in gaining a considerable following for his methods; but it is not as a working formula for artistic production today, so much as a brilliant and novel explanation of the structural formulae of sixth and fifth century Greek vases that Mr. Hambidge's treatise commands the attention of classical archaeologists, who owe its author their gratitude for turning his labor and their attention so searchingly to the fundamentals and minutiae of the formal structure of many of the most beautiful shapes of ancient pottery.

Those who had not the fortune of initiation through personal instruction had for long heard distantly of Mr. Hambidge's process of "Dynamic Symmetry" as of some great thaumaturgy through which the theory of ancient design had been fundamentally affected. When at last Mr. Hambidge published his book on structural design, based on accurate and very detailed measurements of Greek vases in the Boston, New York, and New Haven museums, his expectant public among classical archaeologists felt, with disappointment, that the subject had not been made as accessible as had been hoped. Very remarkable properties were apparently inherent in ancient vases; but there was no simple and direct statement of what dynamic symmetry was, or how it was to be detected, or what artistic properties it imparted. The shadow of a geometric mysticism seemed to obscure the issues. Before

¹ Jay Hambidge, *Dynamic Symmetry: the Greek Vase*. Yale University Press. 1920.

one can appreciate, one must understand; but the understanding of dynamic symmetry had been left extremely difficult.

From Mr. Hambidge's treatise it is apparent that dynamic symmetry has to do with the relation of surface areas in a design. "Static symmetry" (which is treated as its antithesis) depends upon simple commensurability of lengths, of linear measurements. But dynamic symmetry, apparently, is not mere commensurability of area. An ellipse and a circle having twice the area of the ellipse are apparently not an instance of dynamic symmetry. Mr. Hambidge confines his instances to rectangles. The computation of areas of curvilinear outline would be distressingly difficult. Accordingly, in the case of Greek vases, it is *not* the area of the vases which is computed. The actual area of the vase surfaces, I may say, is nowhere computed, and is a matter of indifference. For the curvilinear area of the vase a simple rectangle is substituted. This is the containing rectangle, of which the sides are parallel to the vertical axis and the base-line of the vase. It is, as it were, the smallest rectangular frame into which the whole vase will fit. To this rectangle the analysis for dynamic symmetry is applied. Not its size, but its shape, is important. If this rectangle can be split up into rectangles of similar and related shapes, and if these smaller rectangles can be used to determine recognizable elements of the vase, the occurrence of dynamic symmetry is held to be established.

In a sense, the first condition can always be fulfilled geometrically, since within any rectangle an infinite number of rectangles of similar and related shapes can be constructed. But dynamic symmetry apparently requires not merely that similar rectangles shall be discoverable, but that the whole rectangle may be completely subdivided into squares and rectangles similar to the original rectangle or of closely related shape. This process of subdivision is the chief geometrical element in dynamic analysis. Such analysis of a rectangle is usually accomplished (1) by division into halves, thirds, etc., or (2) by laying off the shorter side on the longer side (so as to form a square) and then treating the remainder of the original rectangle as a new rectangle subject to similar analysis. The completed process will thus show a disintegration of the original rectangle into squares and rectangles. These rectangles will be similar to the original rectangle only under certain conditions. Rectangles fulfilling these conditions are the only ones used for dynamic symmetry. Mathematically

it is perfectly easy to formulate these conditions and discover what rectangles will satisfy them.¹

¹ As this is nowhere clearly performed in Mr. Hambidge's book, a brief notice may be of service:

(1) When the short side is laid off on the long side of a rectangle so as to form a square, the requirement that the remainder of the rectangle shall be similar to the original rectangle may be stated thus,

$$x-1 = \frac{1}{x}$$

where x is the long side, and the short side is 1. This equation will be satisfied if $x = \frac{\sqrt{5}+1}{2}$ (*i.e.* very nearly 1.618). A rectangle with its sides in the ratio of 1.618 to 1 will, therefore, satisfy the condition. This particular 1.618 shape is called by Mr. Hambidge the "Whirling Square Rectangle" and is, next to the square, the most frequent form in dynamic analysis.

(2) Since $\frac{\sqrt{x}}{x} = \frac{1}{\sqrt{x}}$, it follows that rectangles of which the sides are to each other as the square root of an integer is to 1, will have a special property of subdivision into shapes similar to the whole. Substituting the value 2 for x , it follows that when a "Root-Two Rectangle" (*i.e.* one of which the longer side is to the shorter as $\sqrt{2}$ is to 1) is cut into 2 parts (*sc.* at the mid point of the longer side) each part will be a "Root-Two Rectangle"; similarly (substituting 3 for x) when a "Root-Three Rectangle" (*i.e.* with sides as $\sqrt{3}$ to 1) is cut into 3 parts, each part will be a "Root-Three Rectangle" (and so on for higher values of x). Because of this property of subdivision, the "Root-Rectangles" are peculiarly suitable for "dynamic" analysis.

(3) The "Root-Five Rectangle" (*i.e.* with sides as $\sqrt{5}$ to 1) is related to the "Whirling-Square Rectangle." Since $\frac{\sqrt{5}-1}{2}$ is the reciprocal of $\frac{\sqrt{5}+1}{2}$ (by equation 1) it may be simply stated that a "Root-Five Rectangle" is made up of a square plus two "Whirling-Square Rectangles," because $1+2\left(\frac{\sqrt{5}-1}{2}\right) = \sqrt{5}$.

The geometric analysis of "Dynamic Symmetry" is therefore based on these three equations:

$$(1) x-1 = \frac{1}{x} \text{ when } x = \frac{\sqrt{5}+1}{2} \text{ ("Whirling-Square Rectangle").}$$

$$(2) \frac{\sqrt{x}}{x} = \frac{1}{\sqrt{x}} \text{ ("Root Rectangles").}$$

$$(3) \sqrt{5} = \frac{\sqrt{5}-1}{2} + \frac{\sqrt{5}-1}{2} + 1 \text{ (analysis of "Root-Five Rectangle" into square and "Whirling-Square Rectangles").}$$

The remarkable subdivisibility of the rectangles used in "Dynamic Symmetry" is thus due to certain simple inherent mathematical properties of the particular rectangles selected. It is not due to the potter nor to the construction of the vase.

Practically, there are only five forms of rectangles used, *viz.*, those with the following ratios between their sides:

- (1) 1:1 (Square).
- (2) $\sqrt{2}$:1 ("Root Two Rectangle").
- (3) $\sqrt{3}$:1 ("Root Three Rectangle").
- (4) $\sqrt{5}$:1 ("Root Five Rectangle").
- (5) 1.618:1 ("Whirling Square Rectangle").

This does not imply that all Greek vases were made within only five bounding shapes, but rather that all Greek vases are contained in rectangles which can be cut up into parts every one of which can be classed as one of these five shapes. Even so qualified, this assertion is sufficiently startling; but Mr. Hambidge shows in his book how true it is.

Now it is perfectly obvious that no merit or ulterior motive or artistic subtlety can be ascribed to a vase just because its containing rectangle can be so subdivided. God, "the eternal geometer," and not the potter, must here have the credit. But if the simplest and most obvious divisions of the containing rectangle frame the various distinct elements of the vase, so that there is a coincidence between the geometrical and the ceramic construction, then it is hard to believe that this occurs by chance; we credit the potter with the intention.

When we consider this coincidence of rectangles with the elements of the vase, we discover that, after all, it is not really as much a question of *areas* as we might have supposed. The geometry is all in rectangular areas; but the coincidence of these areas with the vase is a matter largely of points on lines. Thus a certain area will establish the width of the lip; but it is not properly the *area* of the lip which is so determined, it is its linear horizontal extension. Actually, it is mainly the linear measurements along horizontal and vertical axes which are determined by this geometry of rectangular areas.

A glimpse of Mr. Hambidge at work will make this clear. In Figure 1¹ the whole rectangle is divided vertically into three rectangles standing side by side. The middle one of the three (CQD) touches the ends of the narrowest part of the bowl. On the vase there is no question of area: the least width of the bowl is one-third the extreme width of the vase,—a purely linear (or "static") measurement. Next, either of the end rectangles is subdivided

¹ *Op. cit.* p. 105, fig. 1.

horizontally into three (according to a perfectly legitimate formula), and the narrow central rectangle so formed is again divided into three (again perfectly legitimately) so as to produce two squares and between them a rectangle similar to the great rectangle of which it occupies the centre. In a very spectacular way, a vertical dropped from the centre of one of these squares

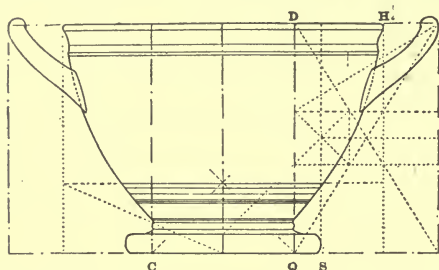


FIGURE 1.—SCYPHUS ANALYSED BY DYNAMIC SYMMETRY.

just strikes the extreme point of projection of the base of the scyphus (S) and a prolongation of one side of the other square just strikes the extreme point of projection of the lip of the scyphus (H). My only aim at present is to make it clear that the areas of these squares

find no echo in the areas of lip or base, but that the geometry of rectangular areas merely fixes the end *points* of these parts of the base. It determines *linear* measurements.

Such a scyphus, then, though composed with "dynamic symmetry," displays to the eye no commensurable areas. We cannot say simply that dynamic symmetry is the coördination of areas in the same sense that "static symmetry" (ordinary linear proportion) is the coördination of lengths. This clearly would not be true.

Rather it would seem that dynamic symmetry is a method for establishing linear measurements according to ratios which would not otherwise be directly intelligible. In the scyphus illustrated above, if the width of the narrowest part of the bowl be called 1, the width of the base would be 1.382 and the width of the lip would be 2.236, while the height of the scyphus would be 1.618 and its extreme width from handle to handle would be 3. Only in this last figure would the uninitiated detect any coherence or rational intention.

In the cantharus¹ shown in Figure 2, in Mr. Hambidge's opinion "one of the finest of Greek cups," the containing area is divided into squares and into rectangles of the same shape as those in our previous figure. The width of the stem, the height of the

¹ *Op. cit.* p. 68, fig. 8.

bowl, the length of the moulded base-line for the painted figures, are all fixed by these squares and rectangles; but no discrete element of the cup coincides with any of these areas. On the cup (Fig. 3)¹ there are no squares or rectangles to be seen. The eye cannot help dwelling on the beautifully running contours; but these contours run through and across

the rectangular geometry, and only in the instance of the base-line and the top line of the bowl is there any agreement between outline of vase and outline of rectangles. Even this agreement is highly theoretical, since there are no straight lines in the cantharus at all. The straight edge of the lip is really the curve of a full circle and looks curved from almost every point of view. From the one point of view in which it appears as a straight line (when the cantharus is held vertically and with the rim at the level of the eye) the base-line will look curved; while if the base-line looks straight, the rim will look curved. The geometrical

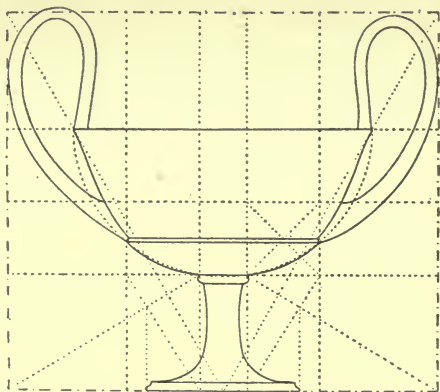


FIGURE 2.—CANTHARUS ANALYSED BY DYNAMIC SYMMETRY.



FIGURE 3.—RED-FIGURED CANTHARUS.

analysis of the figure is based on an orthogonal projection of the vase upon a single vertical plane. Like an architect's elevation of a façade, it is true, but unnatural. If it is thought that this is a quibble over minutiae, the hastiest measurement performed on the photograph of this vase will convince one that the consideration

¹ *Op. cit.*, pl. facing p. 68.

is important, since the vase in the photograph will not measure up to the ratios in the diagram, even approximately. The actual vase has to be measured with caliper and ruler for true diameters and heights and widths, before the ratios will work out.

All this serves to indicate that a vase composed in dynamic symmetry will not reveal commensurable areas to the spectator nor even provide him with data from which such area relations can be readily inferred.

In our contemplation of a vase we can scarcely be expected to correlate rectangular air-spaces with others which overrun the edges of the vase, since a fundamental requirement of esthetic contemplation is the isolation of the artistic object from its accidental surroundings. The boundary lines of a piece of sculpture are much more truly barriers the more we concentrate our attention upon artistic qualities. It is a perverse requirement that we should treat the contours of a beautiful vase as practically nonexistent in order to overlap them with imaginary rectangles. We can do it on paper; but in the presence of an actual and material vase, we are conscious that the region where surrounding air ends and vase begins is as crucial as the imaginary plane in a play-house where audience ceases and stage commences.

Moreover, many of the dimensions are determined by much more elaborate geometrical constructions than the mere subdivision of the containing rectangle into subsidiary ones. Diagonals, intersecting diagonals, and verticals or horizontals drawn from such intersections, play a very important part. "It seems to have been recognized early that diagonals were the most important lines in the determination of both direct and indirect proportions."¹ In the diagram of the cantharus (Fig. 2) a line from either upper corner of the containing rectangle drawn to the mid-point of the base cuts across the ends of the rim of the bowl and thus fixes its length. A vertical dropped from the intersection of two diagonals of related rectangles fixes the width of the base. Could any Greek, holding up this cantharus, with its fine play of rounded shapes and contours, mentally make these constructions of rectangles which lie partly on the vase and partly in the empty air, so as to feel the cogency and the rightness of these lengths of rim and base, as determined by such intersections? Clearly that is not the intention. Rather we must

¹ *Op. cit.* p. 50.

imagine that all this geometrical manipulation is a guide not for the spectator, but for the potter; and perhaps because of it, some quality of rightness or beauty or relevance accrues to the vase, so that its results are somehow felt, though the geometric means are not understood. This seems to be Mr. Hambidge's contention. To the employment of dynamic symmetry he attributes "the quality of inevitableness." He admits (p. 103) that the "key-plan" of a "well-trained designer who understands his symmetry . . . will be unintelligible to any inferior in symmetry knowledge to himself"; and suggests (*ibid.*) that "dynamic symmetry produces in a design the correlation of part to whole observable in either animal or vegetable growth. It is a satisfying harmony of functioning parts which suggests a thing alive or a thing which has the possibility of life." "Beauty, perhaps, may be a matter of functional coördination."

Dynamic symmetry depends, then, on the area subdivisions of the containing rectangle, but is not a method for fixing areas. It determines certain crucial points in the design, but apparently leaves the potter free to choose his outlines between these points and so make his areas what he will. The dynamic rectangles will be unaffected by his choice of contours, since these rectangles are part empty air and part orthogonal projection of vase upon a plane surface. We had always imagined that the curving outlines of ancient Greek vases were their supreme artistic quality and the source of our delight in them. For Mr. Hambidge these outlines are seemingly irrelevant. As far as any statement in his book goes, I can see no ground for holding that *any* vase constructed on points coincident with the intersections which occur in the geometry of Figure 2 is a whit less beautiful than this cantharus. Yet many designs which would satisfy the geometric analysis would be extremely ugly in outline.¹

¹ On pp. 126 f. Mr. Hambidge hints at a "method of relating curves to the straight line and area proportion." He gives as an instance a *deinos* ("a static example") and shows how the curve runs tangent to the diagonals of certain areas. But as these areas are all composed of uniform squares, the instance is exceptional. Mr. Hambidge says further: "Hardly a vase, among the hundreds so far examined, fails to disclose this method of relating curve to angle, area, and line. The constructions necessary to show this have been kept out purposely in other examples to avoid confusion." We can only regret that no diagrams illustrative of this method of relating curves were included. Rectangles can certainly be drawn so that their diagonals shall lie tangent to the

Dynamic symmetry must accordingly be at most only a contributory influence and not a sole and sufficient cause for beauty in a design. As always, there are here no mathematical formulae which can guarantee to a craftsman inevitably his artistic success. But if that is the case, what (in less vague and general phrases than those which we have quoted) does the use of dynamic symmetry really contribute to a design?

To answer this question we must watch the process of vase analysis a little more closely.

II

We have seen that the shape (not the size) of the containing rectangle is the starting-point for further analysis. It is clear that (quite apart from size) the shape of a rectangle depends upon the *relative* lengths of the longer and shorter sides. The ratio of length to width is a sort of index of the shape. To determine this index we may measure the length of the sides (by any scale) and divide one measurement by the other. The resulting numerical value will be the same for all rectangles of similar shape, no matter what their size or what scale of measurement we have used. "The first step is the approximate determination of the containing rectangle. This is done arithmetically from direct measurement."¹

Since very few Greek vases have a width or height more than three times their other dimension, the index of their shape will nearly always be a number between 0 and 3. Arithmetically, the index is carried out by Mr. Hambidge to three places of decimals to insure accurate distinction. One would expect to find all imaginable values between 0 and 3. In Mr. Hambidge's book one learns that certain combinations of figures are favorites and tend to recur frequently. Thus 1.236, 1.382, and 1.854 occur in many instances. Why 1.236 each time, and not 1.234 or 1.239? It is only fair to say that 1.236 is only an approxima-

contour curve of any vase; but it is not immediately apparent that the contour can be constructed by means of diagonals to the rectangles actually used in the dynamic analysis of the figures of Mr. Hambidge's book. The consideration seems so important for the whole theory of dynamic symmetry that we may confidently expect further and more explicit details from Mr. Hambidge and his collaborators.

¹ *Op. cit.* p. 102.

tion: 1.236 yields dynamic results, whereas 1.234 and 1.239 do not. Therefore in the "approximate determination of the containing rectangle," any index falling close to 1.236 may be classed as an instance of that particular number. I do not know just how great a margin of error is allowable. Mr. Hambidge tells us that he "has found that the small errors found in Greek pottery, except in few cases, are practically negligible," and that "it is really better to make the small corrections necessary to true up an example" (p. 68); and again that "the percentage of error is much smaller in the bronzes than in the pottery" (p. 76), so that in the clay vases, from which most of the examples are derived, some deviation from the exact three-place decimal of the correct index is always to be expected.

To advance from this stage of the analysis, the student must know the kind and character of the rectangle revealed by this numerical index. A peculiar family of rectangles lurks in such indices as .618, 1.236, 1.382, 1.618, 1.809. Another family includes .5858, .7071, 1.3535, 1.4142. Clearly this is a matter of familiarization with certain effective numbers, and requires a certain amount of practice or study of Mr. Hambidge's geometrical manipulations.

Granted that the index is one of these effective numbers, the next step is the disintegration of the rectangle into component squares and rectangles which (though of varying sizes) will all have the same index, or an index belonging to the same family. Thus, in Figure 1, all the subdivisions are either squares or rectangles, of which the index is .618 (*i.e.* one-third of the index of the containing rectangle, to which it is, therefore, closely related). In Figure 2, all the subdivisions are squares, or .618, or .382 rectangles, which are all related to one another and to 1.118, the index of the containing rectangle.

The object of this manipulation is, as we have seen, to fix points which shall coincide with important end-points of the elements of the vase. Thus in Figure 2, the end-points of the rim, the base, the ring at the top of the stem, and the moulded ground-line for the painted figures, are so determined.

There is no rule or law which demands that corresponding points or measurements in vases of a similar shape or class shall be fixed by the same specific subdivisions of the rectangle. Any point may be fixed in any way, provided that the rectangles are always constructed so as to be similar or related, and that no

intersections shall be used unless they be produced by diagonals of such rectangles. If this condition is fulfilled, the intersection of any two available diagonals may be used to fix any point on the same horizontal or vertical axis. Sometimes it is the extreme projection of a base moulding or lip moulding, sometimes it is the inner edge of these mouldings, sometimes it is the imaginary projection of the contour of the bowl across base or lip, which is so determined. In consequence, it is impossible to give a clear statement of the artistic advantage which such a haphazard procedure might be expected to impart to a vase. We must be content with the vague phrases which Mr. Hambidge gives us and which we have quoted.

In defence of Mr. Hambidge's method it should be urged that, after all, it is noteworthy that (1) Greek vases are, by actual measurement, contained within just these rectangles which possess such conspicuous properties of subdivision rather than in other rectangles without these properties, and (2) there are so many coincidences between the actual vase and a geometry with such restricted rules of play. These two arguments are vital, and deserve attention and discussion.

Is it not significant that, when so many vases have been so accurately measured, there should be such a persistent conspiracy in favor of these peculiar rectangles? How is it that, allowing for a margin of error, the indices always lie so close to one of these effective numbers?

If the method of arithmetical analysis is closely studied, it will transpire that the crowd of these effective numbers is rather larger than one would suppose. Any simple multiple or sub-multiple of an effective number is an effective number; any effective number added to unity or to twice unity or to half unity, or subtracted from unity, is an effective number. In determining the index, if the length of the shorter side is divided by the length of the longer side, a fraction between 1 and 0 must necessarily result; while if the division is performed the other way round (longer side by shorter side) a number greater than 1 (and probably less than 3) will result. Consequently every index above unity has a corresponding index below unity (its reciprocal) and the ranks of effective numbers are thus doubled. The following is an incomplete list of effective numbers between 1 and 3, occurring in the vase analyses in *Dynamic Symmetry*. To each one of these there is a corresponding reciprocal lying between 1 and 0:

1.0225	1.2071	1.528	2.000	2.528
1.0356	1.236	1.5858	2.045	2.618
1.045	1.2764	1.618	2.118	2.7071
1.118	1.2929	1.691	2.1213	2.764
1.1382	1.309	1.7071	2.1382	2.854
1.146	1.3455	1.7236	2.236	2.8944
1.1708	1.3535	1.764	2.309	2.944
1.191	1.382	1.7888	2.3535	
	1.4142	1.809	2.382	
	1.4472	1.854	2.4142	
	1.472	1.8944	2.4714	
		1.9045	2.472	

If necessity arose, other combinations could be made and interpolated in the series; but these fifty are all that were actually employed for the analysis of nearly one hundred different vases, all of which display more or less clearly the presence of dynamic symmetry in their design.

If we examine the above table, we shall find that there are no intervals or gaps as great as .1, and that nearly one half the intervals are less than .03 and one fourth are less than .02. These intervals represent very small differences in the linear measurements of an ancient vase of ordinary size. If a hydria about 10 inches high yielded an index of 1.125 on first measurement, this could be classed as an instance of 1.1382 with a deviation of only one twentieth of an inch in the measurement of its height and width; or it could be considered to be an instance of 1.118 with a deviation of barely half as much. As we can scarcely hold the potters accountable to the twentieth part of an inch, it is abundantly clear that there is no difficulty in classifying any vase under one of the effective numbers in the table. The most awkward situation which could arise would be an index of 2.1871 (which falls midway in the largest gap in the table); yet a lecythus $8\frac{3}{4}$ inches high, which yielded this index, would only differ from a 2.236 or a 2.1382 lecythus by one sixteenth of an inch in its height and width; and this, be it remembered, is the most unfavorable instance that can readily be imagined.

Yet, if the identification of the containing rectangles of actual Greek vases with the rectangular shapes of which the indices appear in the above table is to a considerable extent facile and arbitrary, how does it come that the "dynamic" subdivisions of these rectangular shapes coincide with so many salient points of the vases? If the potter did not intend this particular rectangle, why does

the vase agree so well with the geometry of dynamic symmetry based on this rectangle?

It is only just to point out that part of this dynamic geometry is merely an elaborate method for cutting lines into halves, thirds, and quarters. A few extreme instances of this somewhat misleading practice may here be considered.

In Figure 4¹ the ratio of total height to total width is 1.472. The containing rectangle is divided by constructing a .618 rectangle at top and bottom (CD and AB in the figure).

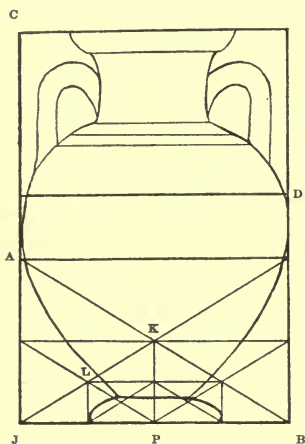


FIGURE 4.—SUBDIVISION OF AMPHORA.

By means of intersecting diagonals, the lower of these .618 rectangles has other .618 rectangles cut out of it (viz., JK, LP) and by these the width of the base and the foot of the bowl is fixed. A moment's reflection will show that the particular shape of these rectangles is irrelevant and that what has taken place is a dichotomy of the total width of the vase into halves and quarters. The width of the base is one half, the width of the foot of the bowl is one fourth the total width.

In Figure 5² the ratio of maximum width to height is 1.809. On AD, which is one half the height, a .618 rectangle is constructed and divided into a square (DE) and a smaller rectangle (EB) which will also be .618 in shape. The intersection of the diagonals of the square "fixes the width of the bowl." The inner vertical side of the square determines the width of the base. "The points GH show that the meander band at the top of the picture is related to the foot."

Since DE is a square on half the height, this geometric construction merely goes to show that the maximum width of the scyphus is equivalent

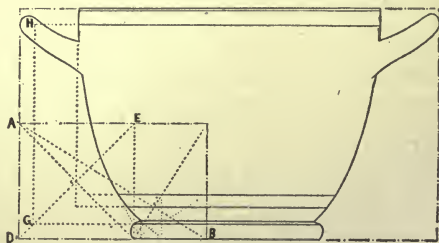


FIGURE 5.—CONSTRUCTION OF SCYPHUS.

¹ *Op. cit.* p. 84, fig. 11.

² *Op. cit.* p. 109, fig. 10.

to width of base plus height of vase, and the width of the bowl is equivalent to width of base plus half the height of vase,—which looks like a convenient potter's formula, but need not be concerned with areas or dynamic symmetry.

As for G and H, since they lie on lines bisecting the corner angles of the rectangle, there is here only an elaborate geometric periphrasis for the observation that the base ring and the top meander-band are of the same height.

It may be readily imagined that such manipulation may become much more involved and that a simple result may be reached by geometric ritual so elaborate that a perfectly honest self-deception on the part of the analyzing draughtsman may ensue. In Mr. Hambidge's book there are enough instances of such geometrical periphrasis to warrant a charge of deliberate obscurantism, were it not apparent that these instances have arisen out of uncritical enthusiasm for geometric analysis.

Yet, when such bisections and trisections of lines by unnecessarily complicated "root-rectangles" have been omitted, there remains a very considerable apparatus of more relevant analysis by proportional subdivision into similar rectangles (which is the earmark of dynamic symmetry). Unless the potters employed similar geometric methods, how is it possible to account for the really extraordinary number of instances where the chief elements of the vase coincide with the divisions of this analysis?

It has already been pointed out that there is no normal and standard system of analysis. Within certain limits and according to certain rules, there is very great latitude. Any method of drawing similar rectangles and constructing diagonals is permissible. What is applicable in one design may be irrelevant in another. There is no explicit or tacit reason why such and such a combination of diagonals should fix such and such a point on the vase. If it does, that is enough: there has been dynamic symmetry.

In Figure 6, a 1.236 (overall) rectangle has been sub-

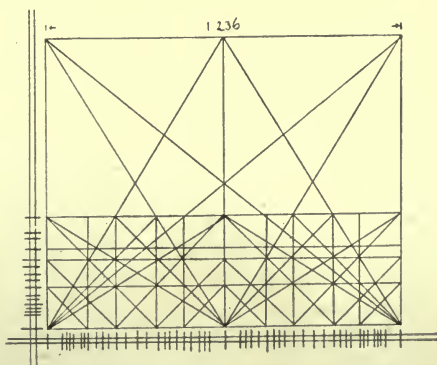


FIGURE 6.—SUBDIVISION OF RECTANGLE BY DYNAMIC SYMMETRY.

divided into two .618 rectangles. I have indicated the most important constructions which are admissible in the dynamic analysis of this shape, and have projected the consequent intersections horizontally and vertically upon a base line and a vertical axis. If any important element of a 1.236 vase (such as the extremity of foot, throat, lip, or the junction of foot and bowl or the level of any decorative band) agrees with any of these subdivisions, the presence of dynamic symmetry is thereby established. Other intermediate positions can be interpolated; but these are the major divisions to which, if possible, the vase analysis should be confined.

III

Shall we say that, with such a system, any vase ancient or modern could be forced into the framework of dynamic symmetry? It is tempting to answer in the affirmative; but I think that the careful student will decide that such an answer is not justified. Even if we were to eliminate 90 per cent of the analyses in Mr. Hambidge's book as mere adroit manipulation, combined with a mystifying conversion of very simple linear ratios into a guise of "root-rectangles," we should be left with an irreducible minimum of still unexplained coincidences. This minimum, however, is not nearly so great as the casual reader would be led to imagine. Many of the irrational ratios and "root-rectangles" are wholly gratuitous assumptions, and their yield of mysterious inner ratios depends upon the very unabstruse geometrical principle that similar rectangles have similar properties and that root-rectangles persistently yield other root-rectangles when they are properly subdivided.

The following is a crucial instance. On the reader's judgment of the issue here involved will hang his whole faith in, or distrust for, dynamic symmetry.

The lecythus¹ in Figure 7 is analyzed by Mr. Hambidge as follows: "The vase shape is two squares, AB and BC in the drawing. AD, the height of the bowl, is a root-two rectangle. The area CD is composed of the square DS and the root-two rectangle SN. A side of a square, ES, produced from E to J, determines the root-two rectangle JS and fixes the juncture of the neck with the body. A diagonal to the whole cuts a side of a

¹ The vase-outline is only roughly sketched in. The comparisons should be made mathematically.

square at G to fix the proportion of the lip. It also intersects the end of a root-two rectangle at L to determine the width of the foot at its juncture with the bowl. The line VI is the centre of the root-two rectangle AD. This is the line on which the painted figures stand. O is the intersection of a diagonal of the whole with the diagonal to the two squares AP. The point U is the intersection of the diagonal to two squares with the diagonal to the root-two rectangle NS. The points H and W are fixed by a line from C to I.”²

The geometrically-minded will readily perceive that the various measurements are nearly all connected with $\sqrt{2}$ ($=1.4142$). If the potter were not conversant with $\sqrt{2}$ and rectangles of which the sides were in this ratio, how did these measurements ever get into his work?

Let us suppose that the potter, knowing nothing of such rectangles, armed himself with a wand, stick, or rule, on which he had marked off 16 equal parts, as the Greeks divided their foot. He would then proceed to shape the bowl of his lecythus, making it as high as his measure, as wide

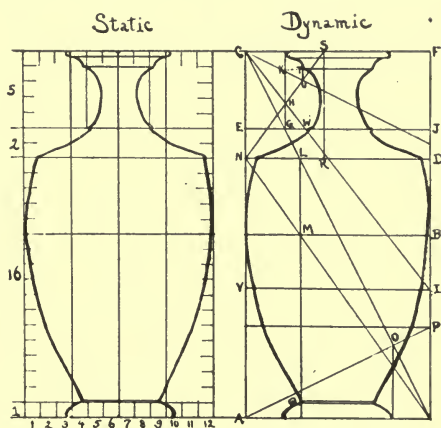


FIGURE 7.—LECYTHUS ANALYSED BY STATIC AND DYNAMIC SYMMETRY.

as 12 of its 16 parts at its greatest width, but only as wide as 5 parts at bottom. To this bowl he would add a base one part high, a throat 2 parts high, contracting to a width of 4 parts, and set on this a neck (with a moulded lip) 5 parts high, the lip being 7 parts wide. This is all pure “static symmetry,” done with a measured rule, without related areas, or $\sqrt{2}$, or root-rectangles. Yet, practically speaking, *this lecythus would be indistinguishable from that constructed dynamically* (cf. Fig. 7), and if it were drawn on paper and subjected to the same analysis of squares and diagonals, all the geometry would be the same. To be sure, there would be no $\sqrt{2}$ rectangles, and the points fixed by the geometry would be shifted a little; but the *max-*

² *Op. cit.* pp. 125 f.

imum displacement would equal only .0025 of the width of the vase,—which would be a *maximum* shift of $\frac{1}{400}$ of an inch for eight inches of height. The following table will show how undetectably minute are these differences between Mr. Hambidge's dynamic vase and the suggested static one:

	Dynamic	Static	Difference
Total height of vase.....	2.	2.	.0000
Extreme width of vase.....	1.	1.	.0000
Height of bowl with base.....	1.4142	1.4167	.0025
Height of throat.....	.1716	.1666	.0050
Height of neck with lip.....	.4142	.4167	.0025
Width of lip.....	.5858	.5833	.0025
Width of foot of bowl.....	.4142	.4167	.0025
Width of base.....	.6 ?	.6 ?	?

In the above lecythus there is, therefore, very fair pretext for saying that the root-rectangles are accidental intrusions and that the ancient potter need not have had any understanding of "dynamic" symmetry.¹

In this connection it should be noted that many of the most frequent and important "effective numbers" happen to fall very close to certain simple "static" ratios:

2.236 ($\sqrt{5}$) is scarcely distinguishable from.....	2.25 = 9:4
2.00 ($\sqrt{4}$) is identical with.....	2. = 8:4 = 2:1
1.732 ($\sqrt{3}$) is scarcely distinguishable from.....	1.75 = 7:4
1.618 (the redoubtable "whirling square" ratio) and ..	
.618 (its reciprocal) closely approximate	1.6 = 8:5
	.625 = 5:8
1.309 (a frequent ratio of the .618 family) agrees very	
nearly with'.....	1.33 = 4:3

Here more than anywhere else lies the key to Mr. Hambidge's ingenious magic.

It is particularly to be emphasized that a ratio approximating 5:8 has in all ages been a recurring favorite in artistic composition and artistic design. It is the famous "divine section," or "*Phi* proportion" about which so many more or less scientifically reputable studies and monographs have been written. Some-

¹ So, in Figure 2, by the draughtsman's own geometry the bowl must be almost precisely twice as wide as it is high, the stem (without the little moulded base) $\frac{3}{4}$ the height of the bowl and its spread at the bottom equal to the height of the bowl. The whole cantharus can be constructed "statically" on a measure divided into 8 parts.

where in the neighborhood of that ratio, man has an inveterate tendency to localize his sense for beauty of proportions. For the old potter, working with a simple rule, that ratio was a natural one to employ. Continued bisection of his rule would give him 8 parts or 16 parts with which to lay out and measure. It was only to be expected that he should often avail himself of that harmonious division into a little more and a little less than half which $\frac{5}{8}$ or $\frac{10}{16}$ would give him. Wherever he used this ratio, the dynamic analyst will be able to discover "whirling squares," since $\frac{5}{8}$ is a remarkably close approximation to the division into extreme and mean proportion from which the "whirling square" rectangle derives its peculiar properties of subdivision.

For example, a common potter's formula for the scyphus would seem to have been "lower diameter plus projection of bowl equals total height." In practice, the potter, having set a measure for his height, divided this into two parts, and used the smaller part for the lower radius and the larger part for the upper radius of the scyphus (cf. Fig 5). If (as he frequently did) he divided his original measure into $\frac{5}{8}$ and $\frac{3}{8}$, the scyphus area will inevitably analyze into "whirling square" rectangles.¹ Did the potter choose his formula in order to make areas which, in orthogonal projection on a plane, would reveal such .618 rectangles lying partly on and partly off the vase; or are these rectangles merely a geometric periphrasis for a few simple linear proportions which helped the potter to a satisfactory scyphus shape? Is the assumption of dynamic symmetry with its attendant paper-made geometry really indispensable? Must we hold that the sixth and fifth century potters—often slave-born humble artisans—knew all this geometry, and, since the constructions cannot be done mentally nor yet on the potter's table, used up precious parchment to draw these rectangles and diagonals? Or are we to assume that they derived their measurements, correct to a fairly small fraction of an inch, from contemplating figures drawn Archimedean-wise with a pointed stick on the ground, or with charcoal on a slab of wood? Even the humblest sixth century potter could divide his rule into eighths and sixteenths; but it is hard to convince ourselves that he ever performed the analyses with which Mr. Hambidge credits

¹ In the scyphus of Figure 1 the potter used $\frac{5}{8}$ of the height for the lower diameter and $\frac{3}{8}$ for the projection. Most of the elaborate geometry of the analysis follows automatically from this formula alone.

him, or that he could have inherited traditional shapes based on such analyses.

To sum up,—when we notice (1) the multiplicity of indices for the containing rectangles, (2) the elaborately various and seemingly arbitrary combinations of sub-rectangles and diagonals by which the chief points of the vase are established, (3) the complete irrelevance of these rectangles to the actual areas of the vase, and especially to the contour-curves which are so largely the animating life of an ancient vase, and (4) the frequent minute divergence between this intricate analysis and the simple ratios of the linear scale,—we must allow that Mr. Hambidge's discovery of a far-reaching and long-forgotten Graeco-Egyptian lore of dynamic symmetry is still very much *sub judice*. As it stands, the evidence is ingenious, but ambiguous. *A priori*, the probabilities are all against its being true.

RHYS CARPENTER.

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ROMAN COOKING UTENSILS IN THE ROYAL ONTARIO MUSEUM OF ARCHAEOLOGY

THE Royal Ontario Museum of Archaeology, Toronto, Canada, although young in years, is unusually rich in the possession of material which illuminates the private life of the Romans in its most intimate daily detail. The opportunity which this museum affords, in the Walter Massey collection, to examine tapestries, towels, sandals and tunics which were used and worn nearly two thousand years ago; to see the hairpins, toilet boxes, mirrors, jewelry, the weaving material and the beautifiers of the ancient Roman lady; to study children's dolls, balls, games and dishes; certainly brings one closer in spirit to the men, women and children who once owned these things, and impresses one with the modernity of the ancients. By no means least of the Museum's treasures, in their importance to the ancient Roman, and, I hope, still of some interest to us today, are the many excellent examples of Roman cooking utensils. These show us that in many respects the cooking utensils of antiquity were the direct ancestors of those of today. Time and experience have enabled us to improve even on the practical Romans from the point of view of utility; yet, with the exception of the fireless cooker, aluminum ware and electrical appliances, there are few modern utensils which were not found in an ancient kitchen.

The commonest and also probably the earliest of Roman cooking utensils is the wide-mouthed terra-cotta bowl, *olla* or *caccabus*, in which porridge, vegetables, meat and fowl were cooked. A cooking pot in the Royal Ontario Museum of Archaeology, (G. 1733), is fairly typical of this style. It is made of terra-cotta and measures $8\frac{3}{4}$ inches across the mouth. The type has remained permanent and is the direct ancestor of the vessel in which the famous lentil porridge is made by the peasants in Italy today. It was generally placed on a tripod, but might stand directly over the fire. Probably Romulus's dinner of boiled turnips,¹ which he is

¹ Seneca, *Apocolocyntosis Divi Claudii*, 9.

represented as enjoying even in the heavens, was cooked in such a pot. In the days of Juvenal,¹ it was used by the peasants both for cooking and serving. Martial calls it *rubra testa*.² "If the pale bean," says he, "boils for you in a red earthen pot (*rubra testa*) you may scorn the tables of rich patrons." The same author mentions this vessel again in connection with porridge.³ Apuleius⁴ writes of a pretty kitchen maid, Fotis, who prepared *mellitum pulmentum* in a little olla, *ollulam*. In our one surviving Roman cook book, Apicius *de re coquinaria*, this utensil is called *olla* or *caccabus*. Many are the things therein referred to, which are cooked in it,⁵ among others, fish, porridge, beans, peas, fowl, pork, and rabbit.

The great majority of the cooking utensils in the Royal Ontario Museum were found in Egypt. Near Thebes, in what appeared to be the remains of a burnt house, a rather complete kitchen equipment was discovered. This set belongs to the Walter Massey collection and contains twenty-seven pieces of bronze in an excellent state of preservation, with a beautiful green patina. The quality and the number of the pieces indicate that they come from a rather pretentious establishment, and Professor Currelly calls them "The Cooking Utensils of a Rich Man's House." The vessels are cast and the sheet of the metal is quite thin. Their date is probably the early period after the Roman occupation of Egypt. It is interesting to note that all are designed for stewing or boiling. In this connection, one recalls the statement of Celsus, that food is more digestible when boiled than when fried or broiled. It is also interesting to observe that the small size of these vessels does not indicate that the Romans were gourmands.

¹ Juv. Sat. XIV, 169 ff.

² Epigrams, XIII, 7.

³ Epigrams, XIII, 8.

⁴ Metamorphoses II, 7.

⁵ Cf. Apic. II, 41; II, 45 *hidrogarata isicia*; III, 68 *Aliter cucurbitas*; IV, 134; IV, 135; IV, 154 *Pisces frizos*; IV, 160 *Mullos*; IV, 161 *Aliter mullos*; V, 185 *Pultes*; V, 186 *Pultes*; V, 188; V, 190 *Lenticulam*; V, 191 *Lenticulam de castaneis*; V, 194 *Pisam farsilem*; V, 195; V, 201 *Pisam sive fabam*; V, 203 *Conciclum apicianam*; V, 205, 206, 207 *grue*; VI, 213 *In grue vel anate, perdice, turture, palumbo, columbo, et diversis avibus . . . ornas et includis in ollam . . . levas et iterum in caccabum mittis*; VI, 216 *Aliter gruem vel anatem ex rapis lavas, ornas et in olla elizabis cum aqua . . . levabis de olla*; VI, 219; VI, 234 *In fenicoptero, fenicopterum eliberas . . . ornas, includis in caccabum*; VI, 251 *pullum in caccabum*; VII, 319 *Tubera radis . . . mittis in caccabum*; VIII, 386 *Porcellum . . . in ollam mittes*; VIII, 399 *Aliter leporem*.

There is also a bronze counterpart (G. 1693) of the terra-cotta bowl just mentioned above, which was used for a similar purpose. The height is $6\frac{1}{2}$ inches; diameter at mouth, 8 inches. There is a smaller utensil of similar shape (G. 1694) in the same collection.

In this collection, also, are three kettles with swinging handles (G. 1700, G. 1715, G. 1716). Each of the handles is bent into a ring at the top so that the caldrons might be hung on a crane, or, to satisfy the Roman sense of order, on the wall when not in use. At the ends, the handles are bent into loops which fit into attachments riveted to the sides of the caldrons. The rivets are very simple—a piece of metal put through the kettle and hammered flat on either side. G. 1700, the largest of these kettles (Fig. 1), is pear-shaped and is the only one of the three that has a lid. One end of the handle is broken. In the centre of the lid a ring has been fastened, and to this ring a chain of four links is attached. This is part of a chain which was probably originally fastened to the swinging handle, or its attachments, so that the lid might not be lost. This is the arrangement on a Greek caldron of earlier date,¹ about the middle of the sixth century, B.C., and on kettles in the Naples Museum (Nos. 24172, and 24173). The dimensions of this kettle are: height with handle $13\frac{1}{4}$ inches, height without handle 8 inches, diameter at top $5\frac{1}{4}$ inches, girth at widest part $23\frac{7}{8}$ inches.

G. 1715 (Fig. 2) is slightly smaller and has no lid. Dimensions: height with handle $12\frac{3}{4}$ inches, height without handle $7\frac{9}{16}$ inches, diameter at mouth $6\frac{7}{8}$ inches, circumference around widest part 24 inches. This kettle shows an interesting bit of ancient mending. The bottom of the pot evidently burned out. Then a disc of bronze of the exact diameter of the bottom was placed on the



FIGURE 1.—BRONZE KETTLE WITH LID: TORONTO.

¹ Cf. Miss Richter, *Metropolitan Museum, Greek, Etruscan, and Roman Bronzes*, fig. 621.

inside and soldered with soft solder in such a way as to make the kettle water-tight again. The solder has disintegrated and the disc is now loose but still in the kettle.

G. 1700 and G. 1715 belong to the class of utensils which bear the name *aeneum*, or the more general word for cooking pot,



FIGURE 2.—BRONZE KETTLE:
TORONTO.

caccabus; but G. 1716 is probably a *situla*¹ or kettle for holding hot water, rather than a pot for cooking. Dimensions: height without handle $6\frac{1}{4}$ inches, diameter at mouth $6\frac{1}{8}$ inches. It had, originally, three feet, which were soldered on, but one is now missing. These feet served the purpose of preventing the hot surface of the bottom of the vessel from coming in contact with the stand or table on which it was placed.

It may be interesting, also, to note in passing a few cal-

drons which, though not included in this excellent group, are somewhat similar to those which we have been discussing. G. 2024, of bronze, was found in upper Egypt. Dimensions: height without handle $7\frac{1}{2}$ inches, diameter of top 5 inches, girth of widest part $20\frac{1}{4}$ inches. It is probably of later date.

Another bronze kettle found in Upper Egypt (G. 2036), has the swinging handle attached in the usual way. This vessel has a very small mouth and must have been used for cooking soup or small vegetables. Dimensions: diameter $3\frac{1}{4}$ inches, height with handle 11 inches. Another small bronze caldron which was found in Egypt shows still another method of attaching a swinging handle. The handle has disappeared but sockets are left in the sides of the kettle.

Another interesting utensil in this collection of bronzes from

¹ A *situla* of different shape but with feet similarly attached is shown in *Arch. Anz.* XV, 1900, p. 188, fig. 14, among other bronzes from Boscoreale, published by Erich Pernice. Three *situlae* with somewhat similar feet, three each, are given by Willers, *Neue Untersuchungen über die römische Bronzeindustrie*, taf. V, 1-3.

Thebes is a large pail with a lid (G. 1714).¹ The rim of the lid, which fits over the outside of the kettle, is slightly warped. Dimensions: diameter at top $9\frac{1}{4}$ inches, height without handle $8\frac{7}{8}$ inches.

That the strainer, or colander, was a utensil often used in the Roman kitchen is shown by frequent reference to it in the recipes of Apicius *de re coquinaria*. G. 1717 (Fig. 3), in "The Cooking Utensils of a Rich Man's House," is an example of a beautiful bronze colander.

Dimensions: diameter of bowl $7\frac{1}{2}$ inches, length $14\frac{1}{8}$ inches. The handle, upon which a lotus design has been incised, ends in the head of a bird.² The holes in the bowl are

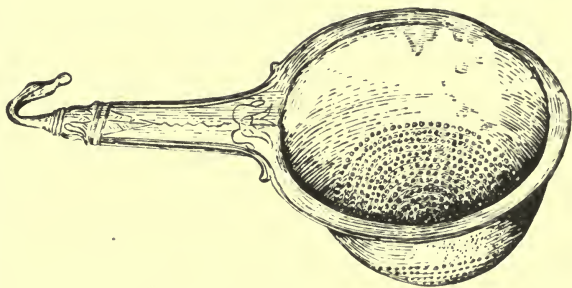


FIGURE 3.—BRONZE STRAINER: TORONTO.

somewhat rudely punched, and do not form a fancy design as is so often the case in colanders. Strainers served for straining wine and other liquids. Snow, the ancient substitute for ice, was placed in the colander, and wine poured through to cool it. Martial³ mentions a *colum nivarium*, and says that it was to be used for Setine wine. A cheaper variety might be strained through linen. Willers⁴ shows a series of articles which belonged to the wine service. They are in pairs; a vessel which looks like a saucepan, a strainer with a rim which exactly fits into the saucepan. The strainers are rather similar to the one which has just been described in the Royal Ontario Museum. It is possible that our strainer, as the flat handle and extended rim suggest, may belong to such a set, and that the vessel into which it fitted has been lost. These utensils appear to have been manufactured in large numbers in the Capuan factories from the days of Augustus to 250 A.D. However, as there are in the Museum of

¹ It resembles somewhat a vessel in Schumacher's *Sammlung antiker Bronzen*, pl. IX, fig. 21. He considers it a vessel for water.

² Cf. Walters, *Catalogue of Bronzes in the British Museum*, p. 83, No. 573, a strainer which has a lotus flower on the handle.

³ *Epigrams*, XIV, 103.

⁴ *Op. cit.*, p. 82 ff.

Cairo¹ two strainers which are almost the exact counterparts of the one in the Royal Ontario Museum of Archaeology, and as there is no real evidence that they belonged to such a set, it is rather more probable that this too is complete in itself.² As was said, recipes in Apicius recommended the use of a colander in preparing foods and this utensil was no doubt used in cooking, as well as in straining wine.

That the man who owned these bronzes was interested in good wine as well as in good cooking is shown not only by the strainer, but also by two beautiful bronze ladles, each ending, as was usual for ladles, in the head of a bird. One (G. 1701) is 20½ inches long; the other (G. 1702) is 19 inches long. Ladles such as these were used for dipping wine or other liquids from deep receptacles. The type which G. 1701 and G. 1702 represent is quite common and seems to have enjoyed a long period of popularity. As Miss Richter has observed,³ one is seen in actual use on a red-figured cylix signed by Brygos,⁴ and ladles of the same shape have been found at Pompeii.⁵ Another most interesting ladle of somewhat the same type, though not belonging to the same set, is G. 1537 (Fig. 4), which was also found in Egypt, near Thebes. This, like the two just mentioned, has a deep bowl and a long handle terminating in the head of a bird, but unlike them, and unlike any I have been able to discover with certainty, it has a four-sided extension handle. The extension was probably to give added strength when great length was not needed; for the long slender handles characteristic of and necessary for wine ladles must have been a point of weakness. This ladle is of bronze,

¹ *Catalogue général des antiquités égyptiennes du Musée du Caire*, Nos. 3559 and 3575. Each has a lotus design incised on the handle. 3559 was also found at Thebes.

² Another type of strainer is in the Metropolitan Museum of Art, New York (cf. Miss Richter, *op. cit.* No. 639). It is smaller and has opposite the handle a hook-shaped projection terminating in a small oblong plate. This projection served two purposes: as a means of resting the strainer across the mouth of the jar into which the wine was poured, and for hanging it from the lip of the jar when not in use. Another of this type was published by H. L. Wilson in the *American Journal of Philology*, XXVIII, pp. 450 ff. It was dedicated to a goddess, as an inscription shows. Still another bronze strainer of this style, from Viterbo, was recently acquired by the Royal Ontario Museum in the Sturge collection. The type is comparatively rare, and seems to belong only to central Italy, especially Etruria.

³ *Op. cit.* No. 652.

⁴ Cf. *Monumenti dell' Istituto IX*, pl. 46.

⁵ Cf. J. Overbeck, *Pompeii*, p. 444, fig. 241.

and in an excellent state of preservation. It has the eye of a bird and a small design incised on the handle. Dimensions: length when shortened 14 inches, handle $11\frac{3}{4}$ inches (extends 5 inches when lengthened), diameter of bowl $2\frac{1}{8}$ inches. The *Catalogue of Bronzes in the British Museum*, p. 322, gives a ladle with a wide hinged handle, No. 2466.¹

Among "The Cooking Utensils of a Rich Man's House," there are also examples of two short bronze ladles with shallow bowls. G. 1723, length $8\frac{1}{8}$ inches; and G. 1703, length $7\frac{1}{2}$ inches.

In addition to the articles which have already been noted from this most unusual set of bronzes, several others may be mentioned. G. 1691 is a vase 9 inches high, designed probably to contain wine or oil. G. 1692, a beautiful bronze pitcher, has a rather elaborate handle soldered on, height $7\frac{7}{8}$ inches. There are also two lamp fillers (G. 1721, and 1724), of which one has lost its spout; the legs of a couch (G. 1698, 1, 2, 3, and 4); and three tiny vases (G. 1699, 1720, and 1722). Of special interest are three small utensils (G. 1718, 1695, and 1696) which, like our kitchen cups, were probably used for measuring, as they seem to correspond almost exactly to the Roman system of measures.

One contains approximately a half pint, *hemina* or *cotula* as it was called; another holds approximately one fourth of a pint, a Roman *quartarius*; and the third, one sixth of a pint, two Roman *cyathi*. One reason for believing that these were kitchen measures is the fact that in many of the recipes in Apicius the quantity of the ingredients is frequently mentioned,² and there must, therefore, have been measures in the Roman kitchen.

¹ The *Catalogue général des antiquités égyptiennes du Musée du Caire*, II shows a bronze ladle, No. 3567, with a handle in two parts. The illustration is not clear, but the description indicates that this ladle is like ours.

² Apic. I, 1 *praemissis vini sextariis duobus*; I, 3; I, 7 *mellis sextarium mittis*; II, 46 *liquaminis quartarium*; II, 48; III, 105; IV, 124; IV, 129, *liquaminis ciatum unum*; IV, 145; IV, 169; VI, 244 *olei acetabulum*; VII, 268; VII, 274; VIII, 392; etc.

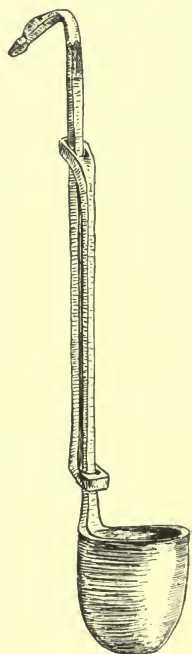


FIGURE 4.
LADLE WITH EXTENSION
HANDLE:
TORONTO.

This collection, then, gives us a fair idea of the contents of a Roman kitchen. One may imagine a small room, for the kitchen usually was small, located in an unobtrusive part of the house with shining utensils of bronze hanging on the walls, or placed on tripods over the hearth of masonry. There would probably be also an arrangement for heating water, and terra-cotta amphoras in which wine, oil, and grain were stored. To complete the picture, one must add the cook, who, if one may believe Plautus, was usually armed with a knife and was witty and thievish. According to Martial, his locks were smeared with grease and soot. However, this collection, even in its completeness, omits many articles which were found in an ancient kitchen. As has been noted, the utensils found in it were designed for boiling, and no kitchen, ancient nor modern, would be complete without a frying-pan. The Royal Ontario Museum of Archaeo-

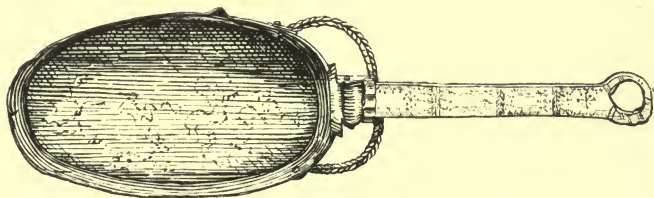


FIGURE 5.—FRYING-PAN WITH MOVABLE HANDLE: TORONTO.

logy is very fortunate in including in the Walter Massey collection a series of unique frying-pans with folding handles, which were found in upper Egypt and belong to the late Roman period. The Latin name for frying-pan as given in Apicius is *sartago*.¹ This name was applied to a flat pan of bronze or iron, round or oblong in shape, which was used for frying meat or fish, or for heating oil, which was an important ingredient of ancient cookery. Isidorus² tells us that the pan took its name from the noise which the oil made when heated.

The four pans in the Royal Ontario Museum of Archaeology (G. 675, 676, 677, and 678) were brought from Egypt in a mass of rust, which was cleaned away by an electrical process. They are of exceedingly fine workmanship and are rather elaborately decorated (Fig. 5). The iron has been hammered into a very thin

¹ Apic. VII, 269 *Aliter ofellas in sartagine abundantanti oenogaro*; VII, 270; *Ponis ofellas in sartagine*.

² Or. XX, 8, 5.

sheet of metal so that the surface reminds one at once of the hammered silverware which comes from Tiffany's workshops, or of hammered brass. The metal of the handles is several times as thick as that of the pan itself, which is quite thin. In two cases, the handle is reinforced by pieces of twisted iron, ornamental as well as useful, which are riveted to the pan and to a projection at the back.

These handles, which are so made that they may be folded over the top, are the most interesting feature of the pans. They are attached by a hinge (Fig. 6) which is very simply constructed. At one end of the pan there was left a pointed projection wide at one end. The sides of this projection were turned up and holes cut in them. The handle ends in a scroll which was made by turning under the end of the metal. This scroll was placed between the sides of the projection, where it exactly fits, and an iron pin was passed all the way through and hammered flat at either end. Encircling each handle, there is a movable bracelet which may be brought down over the point of the tip at the end of the pan, to hold the handle firmly in place when extended. In three cases, these

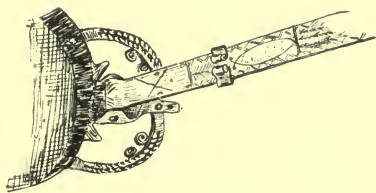


FIGURE 6.—HINGE OF HANDLE OF FRYING-PAN: TORONTO.

bracelets end in a double scroll on the upper side of the handle, and hence are ornamental as well as useful. In the fourth case, the bracelet is loose and not artistic. The fact that the handles fold over the pans and that the pans were found with other military remains, suggests that they were a part of a military equipment, and that they were thus designed in order to make the soldier's kit more compact. Frying-pans similar in shape to these but with fixed handles are fairly common. They have been found at Pompeii and elsewhere, and may be seen in many museums.¹

However, specimens of frying-pans with folding handles are almost unique. I have been able to find reference to only one other which is quite similar to those in the Royal Ontario Museum of Archaeology.² It is of bronze, and was first published by M.

¹ Guhl and Koner, *Das Leben der Griechen und Römer*, fig. 907; Kelsey Mau, *op. cit.*, fig. 196; Overbeck, *op. cit.*, fig. 241; Naples, *Real Mus. Borbon.* V, pl. 58, Nos. 8 and 9; Ceci, *Piccoli Bronzi del Real Mus. Borbon.* pl. I, Nos. 24 and 25; Tarbell, *Cat. of Bronzes in Field Museum*, p. 136, No. 228.

² Cf. H. Willers, *op. cit.* p. 65.

Maxe-Werly in the *Mémoires de la Société Nationale des antiquaires de France*, 1883, p. 274. It was found a few months previous to this publication, says Maxe-Werly, at Rheims, and was, at the time of publication, the property of M. Leon Foucher. Dimensions: width 12 cm., length 25 cm., depth 3 cm. It has a small lip at one side. This pan bears an inscription T E (in monogram), T. TRI (in monogram), C. O. The publisher calls attention to the fact that it resembles the model which was adopted for the mess of the officers of the army in his own day, and he thinks that the ancients used it for a similar purpose. The type seems to have persisted in the army even to our own day, as a somewhat similar frying-pan in aluminum, which served as both cooking utensil and plate, formed a part of the American soldier's outfit for the recent war. The bronze pan found at Rheims and the four in the Royal Ontario Museum are, so far as I know, the only ancient examples of oblong frying-pans with folding handles. Maxe-Werly, in the article just cited, mentions the existence in the museum at Vienna of a similar utensil, round in form. Among the twenty-two Coptic utensils which were presented to the Field Museum of Natural History in Chicago in 1894 by Ali Effendi Murad, American Consular Agent, at Luxor, Egypt, is an oblong iron frying-pan with folding handle. This is somewhat similar to those in the Royal Ontario Museum.

The bronze frying-pan which was found near Rheims has no decoration, but the handles of three of those in the Royal Ontario

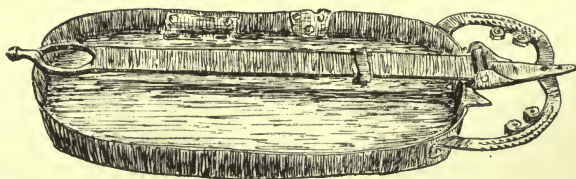


FIGURE 7.—MENDEED FRYING-PAN, HANDLE BENT OVER: TORONTO.

Museum of Archaeology are rather elaborately decorated with incised lines. On two, a fish has been incised. Moreover, the arrangement of the lines incised on all of these handles seems to have been taken from a motif which was suggested by the backbone, tail, head and eyes of a fish. One of the pans (G. 676) has a lip for pouring out gravy (Fig. 5). With one exception, the pans are in an excellent state of preservation. One, however, has several large holes

which have been eaten into it by rust. This is the plainest of the four and probably the oldest. Another (G. 677) shows in two places an interesting example of ancient mending. Two very thin sheets of metal were put on the inside of the pan and riveted through (Fig. 7). A similar instance of ancient mending is found on a bronze pan at Vassar College. The dimensions vary somewhat. G. 678, entire length including handle, $23\frac{1}{4}$ inches, length of pan $10\frac{3}{4}$ inches, width $6\frac{1}{2}$ inches, depth $\frac{7}{8}$ inch; G. 677, entire length 26 inches, pan 12 inches by $7\frac{3}{8}$ inches; G. 676, entire length $26\frac{1}{4}$ inches, pan $13\frac{1}{4}$ by $7\frac{1}{4}$ inches, depth $1\frac{1}{4}$ inches; G. 675, entire length $25\frac{3}{4}$ inches, pan $11\frac{1}{2}$ inches by $7\frac{3}{8}$ inches, depth $1\frac{1}{4}$ inches.

Near Thebes, in the same locality where the frying-pans were discovered, there were found also two other utensils (G. 646 and 647), which at first sight look like trays and may possibly have

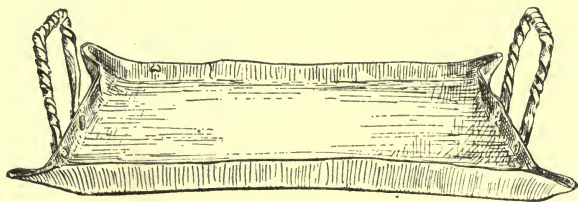


FIGURE 8.—PAN FOR BAKING OR FRYING: TORONTO.

been used for this purpose, for, as we know, each course of a Roman *cena* was brought in on a tray. These utensils, however, are of hammered iron, while the trays which are mentioned in Latin literature are of silver, or wood. This fact, and the presence of lips at the sides of one of these utensils, and at the corners of the other, indicate that they, too, were pans for baking or frying, or perhaps were used for fish sauce. G. 647 (Fig. 8) has lips at the four corners. Its length is $12\frac{7}{8}$ inches, width 7 inches, depth $\frac{7}{8}$ inch, height of handle from point of attachment 3 inches. The state of preservation is exceedingly good. One might think that the lips of this vessel were an accident due to the fact that it was simpler to make a pan which consists of a single sheet of metal this way than any other, but this cannot be true in the case of the other utensil, as the lips are carefully wrought at the sides. G. 646 (Fig. 9) has the following dimensions: length $15\frac{5}{8}$ inches, width $7\frac{3}{4}$ inches, depth 1 inch, height of handle $3\frac{1}{8}$ inches. The state of preservation is good. The

handles are of twisted iron and are riveted on. A rivet at one end seems to indicate mending. An extra piece of metal has been put on the inside of the pan. Both the workmanship and ornamentation indicate that these pans were probably made by the same smith as the four with folding handles. At least, they belong to the same period. The Museum contains also a tiny round toy frying-pan.

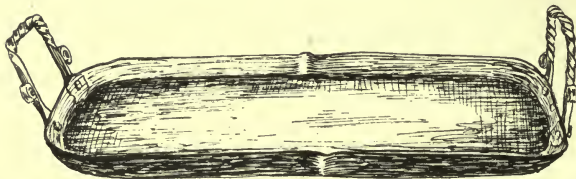


FIGURE 9.—PAN FOR BAKING OR FRYING: TORONTO.

From the same locality whence came the two sets of pans come also seven iron ladles (G. 699, 700, 701, 702, 703, 704, 705). They are of varying sizes, but the surface of the metal and the style of decoration on the handles point to the probability of the same smith's shop in which the frying-pans, the keys, axes, and other iron utensils in this collection were probably made. Each ladle, including the handle, is made of one sheet of iron hammered out. The handles, with one exception, contain holes for suspension. This ends in a point and has another piece of iron riveted at right angles about one inch from the end. All of the handles are decorated with incised lines or dots. The use of these ladles is somewhat uncertain. They may have been employed in cooking, or the soldiers may have used them for melting lead.

Dimensions

G. 699,	length	$11\frac{5}{8}$	inches,	diameter of ladle	$4\frac{1}{8}$	inches;
G. 700,	"	$16\frac{7}{8}$	"	"	$4\frac{7}{8}$	" ;
G. 701,	"	$17\frac{1}{2}$	"	"	$5\frac{7}{8}$	" ;
G. 702,	"	$15\frac{5}{8}$	"	"	$4\frac{1}{8}$	" ;
G. 703,	"	$14\frac{3}{4}$	"	"	5	" ;
G. 704,	"	$16\frac{5}{8}$	"	"	$4\frac{5}{8}$	" ;
G. 705,	"	$14\frac{7}{8}$	"	"	5	" ;

Not only were frying-pans used for cooking small pieces of meat, and spits¹ for roasting whole the boar which formed the most important feature of a Roman banquet, but another utensil

¹ Verg. *Aen.* I, 211 ff.; Juv. *Sat.* XV, 81 and 82; Verg. *Aen.* V, 102 and 103.

also, the gridiron, *craticula*, served for roasting and broiling meat. Martial¹ mentions both of these instruments. He says:

*Rara tibi curva craticula sudet ofella;
Spumeus in longa cuspidē fumet aper.*

At the *cena Trimalchionis*,² one silver *craticula* contained smoking sausages, and on another the chef served snails. The more usual materials for this utensil were, however, bronze and iron. In the Royal Ontario Museum, there is a most interesting example of an iron *craticula*, G. 1383 (Fig. 10), which was discovered on Hannibal's battle field at Lake Trasumenus, and which may have been used by the soldiers there. It has eight prongs branching from a central stem: Three of these are broken at the end. The iron socket into which a wooden handle was fitted is partly eaten away by rust, and the whole instrument is much corroded. This gridiron differs somewhat from the ordinary type³ in that it has no transverse rod to reinforce it at the outer end. Dimensions: length with handle 22 inches, without handle 16 inches; width from outer end 8, 7, 5½ inches. Walters, *Catalogue of Bronzes in the British Museum*, gives, under late Etruscan bronzes, No. 783, a gridiron (?) which, like the one in the Royal Ontario Museum of Archaeology, had a socket for a wooden shaft.

Another interesting iron kitchen utensil in the Royal Ontario Museum of Archaeology (G. 577) is a meat hook (Fig. 11), Latin *harpago*, Greek κρέαργα, which was doubtless used for taking meat from the pot, although various theories have been given for its function. It had a Greek origin, and Helbig identi-

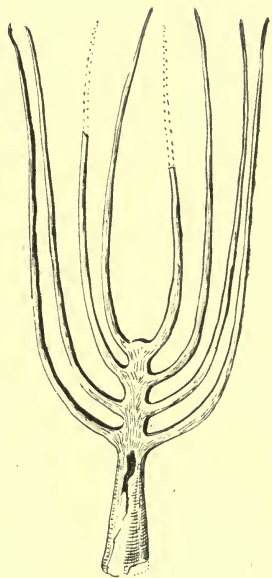


FIGURE 10.—ROMAN GRIDIRON FROM LAKE TRASUMENUS: TORONTO.

¹ Mart. XIV, 221.

² Petron. Sat. 31 and 70.

³ Cf. Daremberg and Saglio, *Dictionnaire des Ant. Gr. et Rom.*, fig. 2049; Miss Richter, *op. cit.* fig. 666 for a gridiron which, though of much earlier date, middle of sixth century B.C., is of the more usual type. This has eight transverse rods and four feet.

fies it with the Homeric *πεμπώβολον*, but this has been disputed. An iron fingered flesh hook is described by the scholiast on Aristophanes¹ as an instrument resembling a hand with fingers bent inward, which was used to take meat from a boiling caldron. Specimens in bronze are found in the British Museum² and other museums. One of these has the prongs formed of seven radiating snakes' heads instead of seven plain hooks. Utensils of this kind, employed for the purpose stated, are represented in red-figured



FIGURE 11.—MEAT
HOOK FROM FA-
YUM: TORONTO.

vase paintings.³ Many of these hooks have been found in Etruria. Our specimen, which was discovered in the Fayum and belongs to the Walter Massey collection, is $15\frac{3}{4}$ inches long. It differs somewhat from the usual type in several ways. In the first place, extant examples are oftener of bronze than of iron. Sometimes both metals were combined in the same instrument. Then, too, frequently the number of prongs is five, which points to the origin of the design of the instrument from the five fingers of the hand. The handle, too, frequently ends in a hollow shaft, into which a wooden handle seems to have been fitted, rather than in a ring for suspension. In many instances, the centre is a ring from which the prongs radiate. They are not riveted on, as in our specimen. Its handle is extended to a point. To this are fastened by rivets, at angles to each other, three narrow pieces of iron hooked at both ends. In both workmanship and decoration, this flesh hook resembles closely the Egyptian frying-pans and

ladles. Incised lines are used for decoration and the handle is twisted and ends in a scroll into which a ring is fastened. This is exactly the principal of the hinge for the handle of the frying-pans. G. 579 is a three-pronged iron fork $9\frac{1}{2}$ inches long, and 2 inches wide, which was probably used in cooking. Daremberg and Saglio, *Dictionnaire des antiquités grecques et romaines*, under *fuscina*, say that this name, though found only in the Vulgate,

¹ *Equit.* 772.

² Walters, *op. cit.* Nos. 784, 784₂, 783₃, 784₄.

³ Cf. Miss Richter, *op. cit.* No. 665.

was applied to a little fork with three teeth, for kitchen use only, as the Romans had no forks for eating.

Perhaps no other cooking utensil is mentioned more frequently in Latin authors than the knife, although the Romans knew nothing of its use at table, except as a carving knife. From the days of Plautus down, the cook is regularly represented as armed with this weapon,¹ his attribute, so to speak, which he uses as the occasion demands. Plautus makes Congrio say that it is a fitting weapon for a cook, and a culinary artist, Machaerio, in the *Aulularia* receives his name from this necessary kitchen utensil. In the *Miles Gloriosus*,² the following command is addressed to the chef Cario: "*Culter probe.*" The cook in Petronius³ seizes his knife and slashes a pig, and in the *Testamentum Porcelli* Magirus cocus says: "*Transi puer, affer mihi de cocina cultrum ut hunc porcellum faciam cruentum.*" The cook in Apuleius⁴ begins sharpening his knives to slay an ass. The Royal Ontario Museum possesses several specimens of this kitchen utensil, which were found in the Fayum, Egypt, and date from the Roman period, the first to the third century A.D. The handles are wooden, the blades iron, and are decorated in some cases with incised lines in designs similar to those found on the frying-pans. One has an inscription. In some cases there are iron bracelets for holding fast the wooden handles. The length of the knives varies from 9 to 13½ inches.

With the knives may be mentioned also an iron instrument which I think was a meat mincer, G. 652 (Fig. 12). It resembles

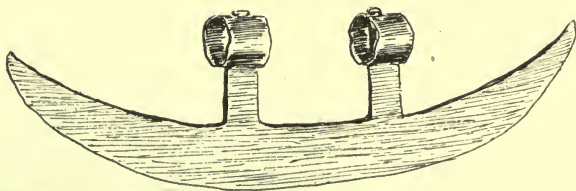


FIGURE 12.—MEAT MINCER FROM UPPER EGYPT: TORONTO.

closely certain kitchen utensils of modern days. It was found in upper Egypt, and consists of a somewhat crescent-shaped blade of iron with two uprights. Rings of iron, through which a wooden

¹ *Aul.* 417.

² *Plaut. Miles*, 1397.

³ *Petron. Sat.* 49.

⁴ *Metamorphoses* VIII, 31.

handle, now missing, once passed, were riveted to this piece. The state of preservation is good. The space between the rings is just large enough for the hand grasp. Dimensions: length $11\frac{1}{4}$ inches, depth $3\frac{1}{2}$ inches, blade 1 inch wide, width between rings $3\frac{1}{4}$ inches. One wonders if the kitchen maid Fotis whom Apuleius¹ mentions may not have been using such an instrument. He says: "*Suis parabat viscum fartim concisum et pulpam frustratim consectam.*"

Not only was a large mortar used for crushing grain² which was to be made into bread, but from the recipes in Apicius *de re coquinaria* we know that a smaller mortar for pounding pepper and other condiments was a necessary kitchen utensil. Of the large mortar, the Royal Ontario Museum of Archaeology shows several examples, one of black basalt which was made for that purpose, and a marble Corinthian capital which was hollowed out and used as a mortar. There are also several very interesting small mortars which were probably used for condiments, or, possibly, for medicine. One (G. 1641) is of stone and has had a small piece broken out on one side. It comes from the Fayum, Egypt, and is $5\frac{1}{4}$ inches in diameter. Another is of basalt and is similar in material and shape to the large basalt mortar. Plautus tells us that neighbors were wont to borrow mortars from each other. Many recipes in Apicius³ bid the cook pound pepper and dry mint, ginger, coriander, anise seed, or rue. Indeed, *adicies piper in mortarium, fricabis* or *teres* is a very common refrain in Apicius. Many references to the *mortarium* may be culled from that ancient cook book.

¹ *Metamorphoses* II, 7.

² Plaut. *Aul.* 95.

³ Apic. III, 98. . . . *In mortario teres piper ligisticum origanum, cepam, vinum, liquamen et oleum*; III, 99. . . . *In mortario teres piper, ligisticum api semen, mentam siccam, cepam, liquamen, oleum, vinum*; I, 41, *Adicies in mortarium piper, ligisticum, origanum, fricabis in se, commisce in caccabum*; III, 67. . . . *adicies in mortarium piper et ciminum, silfi modice (id est lasaris radicem) rutam modicam*; III, 98. . . . *in mortario teres piper, etc.*; IV, 117, *Aliter sala cottabia apiciana; adicies in mortario api semen, puleium aridum, mentam aridam, gingiber, coriandrum viride, etc.*; IV, 118, *adicies in mortarium piper, mentam, alium coriandrum viride, caseum bubulum, sale conditum aquam, oleum, in super vinum et inferes*; III, 99. . . . *in mortario teres piper, etc.*; IV, 125. *Patina de asparagis frigida accipies asparagos purgalos, in mortario fricabis, aqua suffundes perfricabis, per colum colabis, et mittes ficetulas curtas. Teres in mortario piperis scripulos VI, adicies liquamen, fricabis vini ciatum, etc., etc.*

Roman recipes sometimes give the weight of the ingredients to be used in *librae* (pounds), *unciae* (ounces), and *scripuli* (scruples), and so one may perhaps include in a collection of cooking utensils the two ancient instruments for weighing, *librae*, balances and *staterae*, steelyards, examples of which are preserved in most museums. The Greeks seem to have used the balances only, and representations are fairly frequent in Greek art. The use of balances is illustrated by a Greek vase with a design showing Hermes weighing the souls of Achilles and Memnon, and by a Roman lamp¹ representing a stork weighing an elephant and a mouse. On an amphora of Taleides reproduced in *Wiener Vorlegeblätter*, 1889 (taf. V, I, c.) there are balances suspended and men weighing. A scene on a Cyrenaic cylix, which was found at Vulci in Etruria, and is now in the Bibliothèque Nationale, Paris, probably represents Arcesilas II presiding at the weighing of silphium on balances suspended from the wall. That the Egyptians also made use of balances in weighing is shown by a picture on a mummy case in Toronto.

The Royal Ontario Museum has an excellent example of small balances which come from Upper Egypt and belong to the late Roman period (G. 648). It is of iron and consists of a horizontal bar with rings at either end to which were attached chains which extended to the two circular pans. The chains are missing but the pans have four holes each showing where they were attached. A vertical piece of iron extends upward from the centre of the horizontal bar. To this is attached by a rivet an iron loop which swings freely and which has a ring in the upper end. Dimensions: diameter of pans $4\frac{7}{8}$ inches, length of horizontal bar $16\frac{1}{2}$ inches, height of vertical piece $1\frac{3}{8}$ inches, height of loop $2\frac{3}{4}$ inches. This is perhaps the simplest and most common form of the *libra*. In *Notizie degli Scavi*, V, 1908, p. 280, is recorded the discovery, August 19, 1904, of balances with an upright standard, so that, instead of being suspended, they could be placed erect on a table or shelf by means of this standard. The crossbar rested on a standard with a square base.²

The instrument for weighing which was more popular with the Romans than the balances, however, was the *statera* or steelyards,

¹ Cf. British Museum, *Guide to Exhibition Illustrating Greek and Roman Life*, p. 161.

² Cf. also *Mon. Ant.*, Vol. 21, p. 6, 1912, for an article on *Librae Pompeianae* by Matteo della Corte.

which was practically of the same type then, as at the present day. It has been suggested¹ that its portability made it especially desirable to hawkers and street sellers, then as now. It consists usually of a bar divided into two unequal parts. On the longer of these, there is a scale which may be marked on one or more of the several faces. Along this portion of the bar, a movable weight may be suspended, which is prevented from sliding off by a knob at the end. The shorter portion of the bar has several hooks attached. The Royal Ontario Museum possesses two good specimens in bronze of the *statera*. One (G. 1679) was bought from a dealer in Rome. The length is 13 inches, length of scale $8\frac{3}{4}$ inches, length of shorter part of rod $4\frac{1}{4}$ inches. The rod is of square section but only three faces are marked. Three hooks were attached at intervals to the shorter portion of the rod, the first at the beginning of this shorter portion, the second $2\frac{1}{4}$ inches away, and the third $\frac{7}{8}$ inch from the second. Only one hook is now in place, one is missing, and one is broken off. The sliding weight in the form of a man's head is exactly 8 ounces.

The second specimen in the Royal Ontario Museum (G. 642) was found in Egypt and is very similar to those just described. The rod is of bronze, but the hooks are of iron. The scale is marked on three faces. As has been said, many of the recipes in Apicius give the weight of the ingredients in pounds, ounces and scruples.²

These examples, though not exhaustive, are, I think, sufficient to show that a Roman chef might equip his kitchen quite satisfactorily to-day from the collection of cooking utensils in the Royal Ontario Museum.

CORNELIA G. HARCUM.

ROYAL ONTARIO MUSEUM,
TORONTO.

¹ British Museum, *Guide to the Exhibition Illustrating Greek and Roman Life*, p. 161.

² Apic. I, 29. *Sales conditos ad multa . . . sales communes frictos lib. I, sales ammonicos frictos lib. II, piperis albi unc. III, gingiberis unc. II, ammeos unc. I, semis, timi unc. I, semis, mittere nolueris, petrosilini mittis unc. III, origani unc. III, erucæ seminis unc. I, semis, piperis nigri unc. III, croci unc. I, isopi cretici unc. II, foli unc. II, petrosilini unc. II, aneti unc. II. Ibid. I, 46. In isicia de pullo; olei floris lib. I, liquaminis quartarium, piperis semunciam. Ibid. III, 105. Et ne lactucæ laedant: cimini unc. II, gingiberis unc. I, rutæ viridis unc. I, dactilorum pinguium scripulos XII, piperis unc. I, mellis unc. VIII . . . dimidium cocleare cum liquamine et aceto modico misces aut post cenam dimidium cocleare accipies, etc., etc.*

TRANSFORMATIONS OF THE CLASSIC PEDIMENT IN ROMANESQUE ARCHITECTURE

ROMAN architecture, both colonial and metropolitan, shows two fundamental types of construction. In the first, inherited from Greece, the walls are built of large cut stones laid without mortar. All ornamentation is fashioned in the stone itself and forms an integral part of the building. This is the type of construction

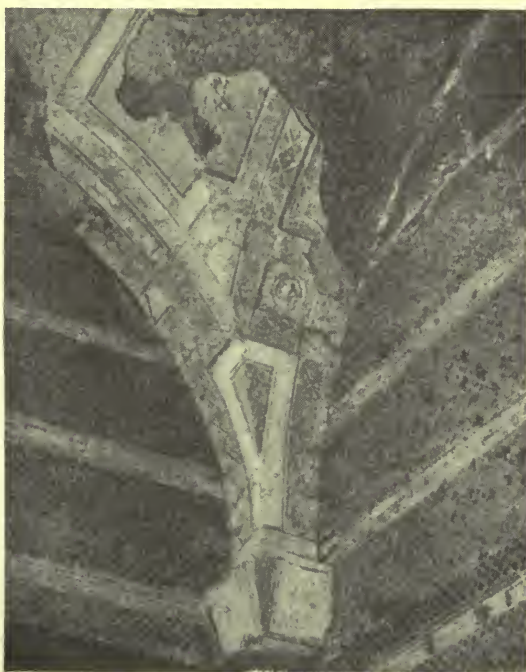


FIGURE 1.—OPUS RETICULATUM WITH HORIZONTAL BANDS OF BRICKWORK:
HADRIAN'S VILLA, TIVOLI.

used in the earlier temples, the amphitheatres, triumphal arches, etc. In the second, introduced at a later period, the walls are built of brick and small stones laid in thick beds of cement (Fig. 1.). Frequently the heart of the wall consists entirely of

concrete. After this construction has been finished it is overlaid with stucco, marble veneer, mosaics, applied orders of stone and marble, and so forth. Such walls are found in the Imperial palaces, basilicae, baths, and most other large buildings of the Imperial period.

In the late Imperial times, especially in the colonies, the marble or stucco veneer was sometimes omitted, the brick and small stones of the wall, arranged in patterns as in the *opus reticulatum*, providing a surface decoration of considerable variety and richness.¹

Both types of construction are found in Gallo-Roman architecture. In Provence where building stone of unusually fine quality abounds and where the influence of the original Greek settlers never quite disappeared, the construction is almost exclusively of stone. This is true to a less absolute degree further north, in Gallia Lugdunensis, but to the west of the Loire where good building stone is scarce, brick or brick and small stones in combination were in Gallo-Roman times as at the present day the favorite building materials.

The importance of this difference in materials is great. In Provence fine examples of the best Roman architecture stood throughout the middle ages and are still standing, with their decoration intact even to delicate details, while with the other type of construction the decorative veneer, quickly falling away or being removed to adorn new buildings, left only a memory and a tradition of its original form. The result was that Provençal architects and sculptors, with classic models always before their eyes, could not greatly misuse the classic motives. The pediment is employed there with such correctness and refinement, even in the twelfth century, that at first glance it would seem an

¹ This treatment became highly developed in the Eastern Empire. Cf. the so-called palace of Constantine IV Porphyrogenitus, of the tenth century. The use of diagonal stone work, known as *opus reticulatum*, was general under Trajan and Hadrian. It seems to have been abandoned, at least in Rome, by the end of the second century (Cf. Lanciani, *Ruins and Excavations of Ancient Rome*, pp. 44-45). At Pompeii there are many instances of *opus reticulatum* carefully laid in courses of slightly different colored tufas, particularly in the lunettes filling the spaces between lintels and their relieving arches. They were almost certainly not intended to be seen, but were to be covered with plaster. A splendid example of polychrome *opus reticulatum* manifestly used for decorative effect is, however, to be found in the first century aqueduct of Minturnae. (Cf. H. C. Butler, *A. J. A. V.* 1901, pp. 187-192; figs. C, 1, 2 and 3.)

antique fragment replaced on a Romanesque church.¹ But elsewhere in France, there being no actual remains of classic decorative forms to preserve the original significance of the pediment, it quickly becomes a mere decorative tradition wholly without structural significance, and changes from generation to generation and from place to place until the last descendant bears no resemblance to the parent form.

The classic pediment in its origin marks the gable end of a rectangular building. But in Imperial Roman architecture it was used to mark any entrance whatever and then was quickly adapted at small scale to form niches or tabernacles for the decoration of interior or exterior walls. As a relief from the monotony of a series of triangular pediments, the curved pediment was in-



FIGURE 2.—CHRISTIAN SARCOPHAGUS: LATERAN MUSEUM, ROME.

vented. Here the two original roof slopes were replaced by the continuous arc of a circle. This form could never have been used to any extent as an actual gable end, but as a wall decoration alternating with angular pediments it became the established rule.

In the decoration of late imperial sarcophagi the pediment often shows a further change. The horizontal cornice is omitted, leaving only the roof cornices, alternately angular and curved, on supporting columns. The series of tabernacles thus formed resembles a series of niches with angular or segmental tops (Fig. 2).²

¹ Revoil, *Architecture Romane*, I, Appendix, has been led by the correctness with which Roman forms and workmanship are reproduced, to assign many of the monuments which he publishes to much too early a date. Cf. Lasteyrie, *Architecture Religieuse en France à l'époque romane*, pp. 411 ff.

² Similar details on a Merovingian carving were found in the excavations of the church of St. Pierre at Metz, illustrated in Lasteyrie, *op. cit.* fig. 33.

In Provence the pediment never degenerates further than this because of the standard set by the classic Roman monuments. But west of the Cévennes we find practically no remains of decoration of the Gallo-Roman period, though there are many fragments of the undecorated substructure. The earliest monument for comparison with the late Roman work is the baptistry of St. Jean at Poitiers, assigned variously to the sixth and seventh centuries, but certainly belonging to the Merovingian period (Fig. 3).¹

The forms here are already very degenerate and the carved ornament is scarcely more than surface scratching, but the tradition of Gallo-Roman art is fully evident. On the outside wall is a

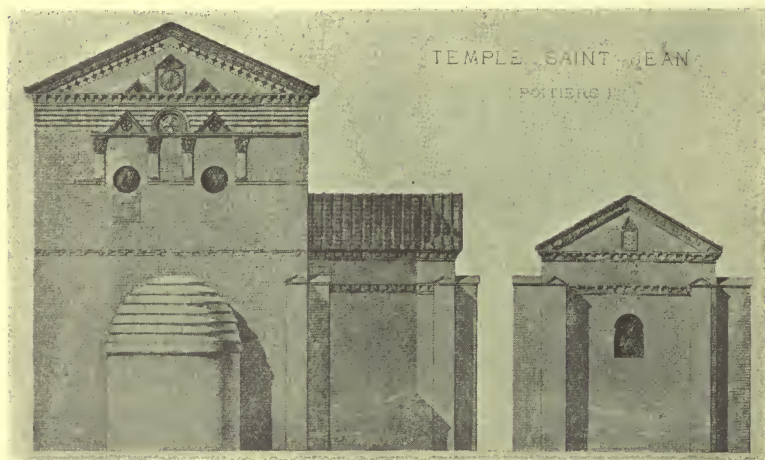


FIGURE 3.—ST. JEAN DE POITIERS: SIDE AND REAR ELEVATION.

series consisting of two triangular pediments with a curved one between supported on deformed and somewhat dislocated pilasters; on the inside the sequence of the pediments is reversed to fit better the two arched windows, and for the same reason the horizontal cornice is here removed. The relation between the decoration on the outside and that on the inside is peculiar; the bases of the exterior pilasters being at the level of the spring of the interior arch pediments, and consequently at the top of the interior capitals. In the gable outside is a rudimentary central tabernacle with

¹ Shown before restoration by Gailhabaud, *Monuments Anciens et Modernes*, Vol. II, text and six plates; and in its present condition in the *Archives de la Commission des Monuments Historiques*, II, pl. 1.

a triangular pediment, flanked by two others reduced to such diagrammatic expression that only the pediments remain. The gable as a whole has still a proper pedimental form, the horizontal and raking cornices being supported by a series of little blocks cut in crude imitation of the modillions of the Corinthian cornice. It should also be noticed that above the windows in the side wall,



FIGURE 4.—ST. G  N  ROUX: GENERAL VIEW AND DETAIL OF LATERAL FA  ADE.

rows of brick alternate with small courses of stone for greater decorative effect, and that in the gable there are inlays of stone and terra-cotta. The apse is rectangular and is surmounted on its rear face by another proper classic pediment within which is again a rudimentary tabernacle consisting of a rectangle bearing a triangle.

The next milestone in the pediment's progress is the church of St. G  n  roux, some twenty-five miles south of Saumur, dating

from the ninth or tenth century.¹ The façade and the transepts are gone, so that there is no indication of the original gable decoration. On the other hand, the exterior of the nave, a feature lacking in the baptistry at Poitiers, gives evidence that debased curved and triangular pediments were not restricted to façades in Merovingian architecture. For the ends of the round headed windows along the sides are crowned by a moulding supported on small projecting blocks (Fig. 4), and a series of triangles is introduced between the windows. There can be no doubt that this arched moulding is not in principle an archivolt extrados but rather a series of curved pediments of a rudimentary modillioned order, alternating with triangular pediments.¹ In the latter the modillions are omitted, as in the pediment of the temple of Minerva at Assisi. Above the windows is a band of *opus reticulatum*; the diagonal stone work of Roman tradition being a form of decoration within the skill of these early builders. The church of Cravant near Chinon, also presumably of the ninth or tenth century, shows a treatment which is practically identical, almost the only difference being that the triangular pediments as well as the window heads are modillioned.²

For the next century of turmoil, civilization in travail has left no indication of its architecture; but we find, nevertheless, pediment traces again in the remains of the early eleventh century church of Cunault (Fig. 5).³ Here neither gables nor side walls are left, but there still exists a magnificent tower. Along the two upper stories are rows of round headed windows crowned with modillion bands, and squeezed in between the curved tops are chevrons, also of modillion bands. The windows are so close together that the chevron has no chance to be a full triangle as at St. Générour and Cravant, but if there were any question as to its origin, the presence of a background of diagonal stone work directly above each row of windows would conclusively prove

¹ *Archiv. de la Comm. des Mon. Hist.* II, pl. 2. The upper story of the gateway of the abbey of Lorsch, often assigned to this period, is evidently an imitation of a series of angular pediments supported on columns. Because of the uncertainty of the date of this structure and the fact that there seems to be nothing elsewhere at all closely related to it, I have omitted it from consideration in this paper. It certainly could not have influenced the architecture of western France.

² Lasteyrie, *op. cit.* p. 150, fig. 134.

³ On the left bank of the Loire 12 km. below Saumur. *Arch. de la Comm. des Mon. Hist.* II, pls. 9, 10.

legitimate descent. Only extreme dearth of architectural progress could have preserved a non-structural ornament with so little change for such a length of time. Should we assume that in this case the ornament has been transposed bodily from one position to another,—from clerestory arcade or transept ends to tower

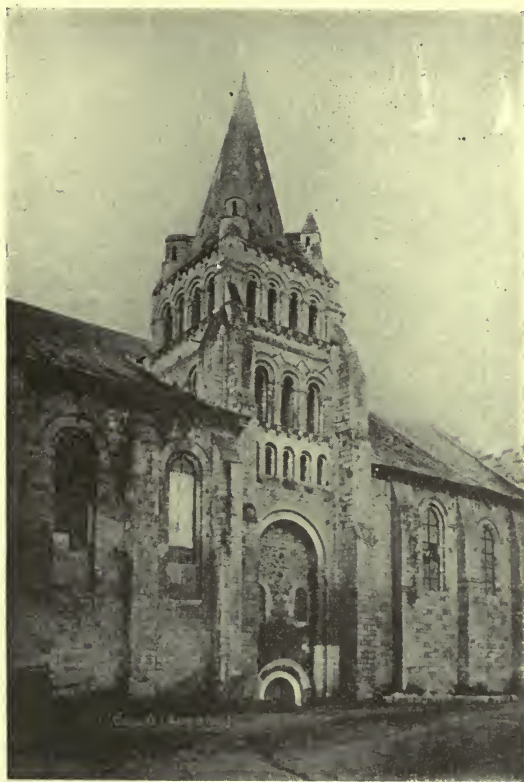


FIGURE 5.—ELEVENTH CENTURY CHURCH: CUNAUT.

walls,—or is it more probable that in the churches of the Roman-Frankish transition rudimentary applied orders were used wherever decoration was attempted, on towers as well as on walls and in gables? I think the latter is the more likely hypothesis.

The later architecture of this particular region, from Poitiers north to the Loire, shows few further traces of the classic pediment. The clerestory windows are too far apart for a continuous arcade treatment, as at St. Générout and Cravant, and transepts

are not found. The façades of Poitou often are crowded with rows of arches, blind or pierced with windows, but there are no chevrons. In the gable, however, of Ruffec,¹ to the south of Poitiers, is a carved Ascension sunk in a shallow niche. This niche is formed by lateral uprights supporting a chevron-shaped top. With the exception of the missing horizontal cornice mem-

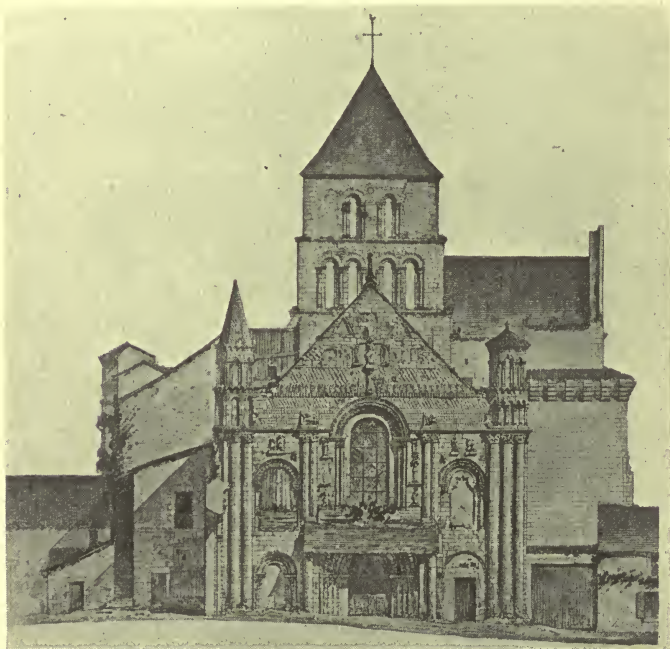


FIGURE 6.—ST. JOUIN DE MARNES: FRONT.

ber, the niche represents summarily all the elements of the Roman tabernacle,—pediment and supporting columns,—in their proper relations.

Another example is found to the north of Poitiers, almost half way to the Loire, on the sadly damaged church of St. Jouin de Marnes (Fig. 6).² In the gable here, are clear traces of two chev-

¹ Charente. The Ascension is a not uncommon motive for the decoration of Aquitainian gables. Cf. Poitiers, Notre Dame la Grande; Angoulême; Bordeaux.

² Deux Sevres. Twelfth Century. *Archiv. de la Comm. des Mon. Hist.* II, pls. 32, 33.

ron-topped tabernacles, flanking a central crucifixion. The background of the gable is filled with *opus reticulatum*, which, incidentally, is of quite general use throughout Poitou and Santonge.¹ The tower also of St. Jouin shows a curious remnant of the chevron. As at Cunault there are two stories of large arched openings, but instead of being continuous, each is divided by a wide central pier into two groups of two arches. In the lower story the haunches of each pair of arches are linked by a small semi-circle, evidently derived from the chevron, while in the central pier the semi-circle has become a complete ring. In the upper story this decorative circle is repeated, but the semi-circles are omitted.

A much fuller adherence to Merovingian tradition is shown by the churches of Auvergne. As this region was not at all intimately connected with that of Poitiers in the Middle Ages, it appears evident that the type of architecture of the baptistry there must have been at some time prevalent throughout all of Aquitania. The treatment on the inside of the walls of St. Jean de Poitiers, two arched niches separated by a chevron-topped niche, is duplicated constantly in Auvergne on the interior of the end walls of the transepts.² At Clermont the two arched niches are filled with windows, but usually all three are blind. Outside of Auvergne this transept decoration is found only in the church of St. Etienne at Nevers (Fig. 7), a building which in many ways suggests Auvergnat architecture though actually to the east of the Loire. The same chevron-topped niche appears again here on the outside of the transept wall, alternating with round-headed niches exactly as in the rows of pediments on late Roman sarcophagi.³

¹ Cf. Echillais and Aulnay, lateral archways of façade; Aulnay, lunettes of windows of apse; Poitiers, Notre Dame la Grande, gable; spandrels of tower and side walls; Ste. Redegonde and St. Porchaire, spandrels and lunettes of tower; St. Hilaire, spandrels of side walls and a band (perhaps restoration) around upper part of apse; Civray, spandrels of lateral arches of façade; Rétaud and Rioux, lower part of apse; Parçay-sur-Vienne, above doorways of façade; Nieul-sur-l'Autise, bands in upper part of façade; even as far south as St. Emilion (Gironde), where there is a band above the arches in the second story of the tower (*Archiv. de la Comm. des Mon. Hist.* V, pl. 62). At Rivières (Indre-et-Loire) there is a curious band of continuous chevrons set in *opus reticulatum* across the apse wall, at mid height; there seems to be nothing of this sort anywhere else (Lasteyrie, *op. cit.* fig. 362).

² E.g. St. Nectaire, Orcival, Issoire, Ennezat.

³ A blind arcade consisting of engaged colonettes joined by alternate semi-circular arches and chevrons, in all respects like those at Nevers, occupied

But while these transept niches are the least changed expression of the Gallo-Roman decorative pediments, they are not by any means the only ones to be found in Auvergne. In the eleventh century church of St. Saturnin (Fig. 8)¹, the upper story of the nave is decorated with arches grouped in sets of threes, and spanning from set to set are chevrons, not so crowded as at Cunault nor yet full triangles as at St. Générour, but quite unmistakable. The same detail appears on the angles of the octagonal tower, connecting the groups of round-headed arches of the lower story



FIGURE 7.—CHURCH OF ST. ETIENNE: NEVERS.

there, and again on the rear face of the central mass above the crossing. In fact it is used wherever the spacing between round top arches permits of its proper development. It is curious, however, that St. Saturnin, the only example of typical Auvergnat architecture where chevrons appear upon the nave walls or the tower, is the only one where there are no chevron-topped niches on the inside of the transept walls.

the upper part of the south wall of the church of St. Demetrius at Salonica. Round-headed windows, not coming above the capitals of the colonettes, occur under the chevrons. The presence of this form in both east and west is no indication of artistic influence one way or the other, since in both places it develops naturally from a common origin.

¹ *Archiv. de la Comm. des Mon. Hist.* IV, pl. 78.

The nave façades of the churches of this region are usually unfinished, or occupied by central towers, the transepts, however, are not lacking in elaborate gable decorations, and here again are found reminiscences of pediment-topped tabernacles like those of the baptistry at Poitiers. At Notre Dame du Port in Clermont¹ the gable triangle shows a curious combination of angular lines. In the centre is an elongated rectangle surmounted by a triangle,—the tabernacle with its pediment. This is divided in two by a



FIGURE 8.—ST. SATURNIN: AUVERGNE.

central vertical line, and in each of the lower compartments so formed is a small chevron. The two flanking tabernacles, which at Poitiers were reduced to simple chevrons, have here become further simplified and have coalesced with the central motive in the form of half chevrons on either side of it. The resemblance of these geometric patterns to classic forms is not at first sight striking, and it might be reasonably questioned whether there were any connection between the two, were it not that the bands forming these Auvergnat gable decorations are all composed of the modillioned moulding, which we have seen to be the direct

¹ Gailhabaud, *op. cit.* II, pl. 48.

descendant of the Corinthian cornice. Moreover, the beautiful mosaic work of brick and vari-colored lavas in the gable is evidently an elaboration of the decorative brick and stone combinations found there in Merovingian times.

At Chauriat, also in Auvergne, the arrangement is somewhat different (Fig. 9). The horizontal member of the gable instead



FIGURE 9.—CHURCH AT CHAURIAT.

of stretching from side to side at the level of the eaves, has been raised half way to the peak of the roof. As a consequence the tabernacle in the triangle above it consists only of the two vertical members, the sloping cornices of the whole roof forming the sloping cornices of the tabernacle. The space below the gable triangle is not left undecorated as at Clermont but is filled with three superposed rows of chevrons, the lowest row springing from the haunches of an arcade. The pattern thus formed seems to be

merely a series of intersecting diagonal lines, but the fact that these lines are often broken instead of running straight from end to end, shows that the builders considered their composition as being primarily composed of chevrons. The background for all this decoration is a vari-colored mosaic derived from the *opus reticulatum*, and the bands of the chevrons, tabernacle, and pediment consist of the modillioned moulding throughout.

Once started on a career of wholly meaningless gable decoration there is scarcely any limit to the designs these degenerate pediments may compose. At Issoire on the rear of the crossing and at the top of the central chapel we see two of which the origin could hardly be suspected were it not for the intermediate steps we have considered.¹

Furthest south of all, the façade of the old church of St. Front at Périgueux, built at the beginning of the eleventh century and now destroyed, presented a gable decorated on a large scale with intersecting diagonal lines.² Here again the fact that many of these lines were composed of modillioned bands proves that this is only a descendant of the gable pediments of Merovingian days. The original church has been so much rebuilt that it is impossible to say whether chevrons ever nestled between the arched heads of the nave windows along the sides.

The peculiar relationship between the decorative orders on the outside of St. Jean de Poitiers and the windows which they frame, which has already been noted (p. 58), occurs throughout Auvergne. Between the upper windows of the apses, and starting at the level of the spring of the window arches, small, purely decorative orders are regularly to be found (see Fig. 8)³. The pediments which might be expected above these orders have disappeared, lost in a wide frieze of elaborate mosaic. The same curious

¹ The gable of the transept at Issoire is filled with three blind arches borne on colonettes. The two side arches are round, the central one a trefoil. This arrangement may also be a reminiscence of a triple tabernacle such as was suggested in the baptistry at Poitiers, though the expression is wholly different from the pattern work in the gable at Clermont. St. Saturnin shows also three blind arches, but all three are alike. In the church of St. Genès at Thiers there are two round arched windows in the gable joined at their haunches by a small semi-circle which encloses a very curious rosette. The whole gable was originally filled with colored *opus reticulatum*, which was apparently not well built, for the present masonry is certainly a reconstruction. Cf. Lasteyrie, *op. cit.* fig. 461.

² de Verneille, *L'Arch. Byzantine en France*, pl. 8.

³ St. Nectaire, Orcival, Issoire, Clermont, St. Saturnin.

arrangement is also found along the upper part of the nave at the Cathedral of Le Puy.

If we turn our attention now to the north of the Loire, we find scarcely any architectural remains, and consequently no chevrons, before the middle of the eleventh century. But to make up for it, at that date the façade of the Cathedral of Le Mans presents a magnificent display (Fig. 10).¹ Chevrons starting from the

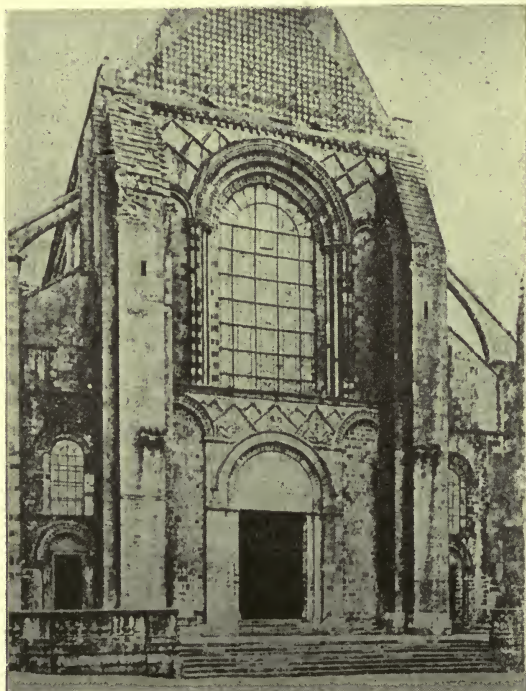


FIGURE 10.—CATHEDRAL OF LE MANS.

haunches of juxtaposed arches have multiplied with dizzying prolixity; their background is still the diagonal stone work of Roman times and the chevrons are still carefully modillioned. Curiously enough, while the gable is composed of *opus reticulatum* in color, it shows no trace of the Gallo-Roman tabernacle. The windows along the side are too far apart for chevrons to stretch between, even the modillioned band is absent from their archivolt, and the tower has long since disappeared. Following this third

¹ Lasteyrie, *op. cit.* fig. 228.

line north from Aquitaine into Normandy we find chevrons constantly used from the middle of the eleventh century through the twelfth and even occasionally in the thirteenth. The most suitable spot for their development seems to have been above the archivolt of coupled windows in the towers.¹ A peculiar variant is found on the twelfth century tower of St. Contest, near Caen, where chevrons have been placed like circumflex accents above the two arches flanking the central opening, apparently because these arches were too small to allow of the ordinary treatment (Fig. 11). Another variant is found on one side of the early twelfth century tower of Fontaine-la-Soret, where on the central pier between the arches of the two large openings is a small arched tabernacle framing a carved figure. The gables of the façades are sometimes decorated in imitation of mosaic work² but as at Le Mans there are no traces of pediments to be found there. The lower façades are usually

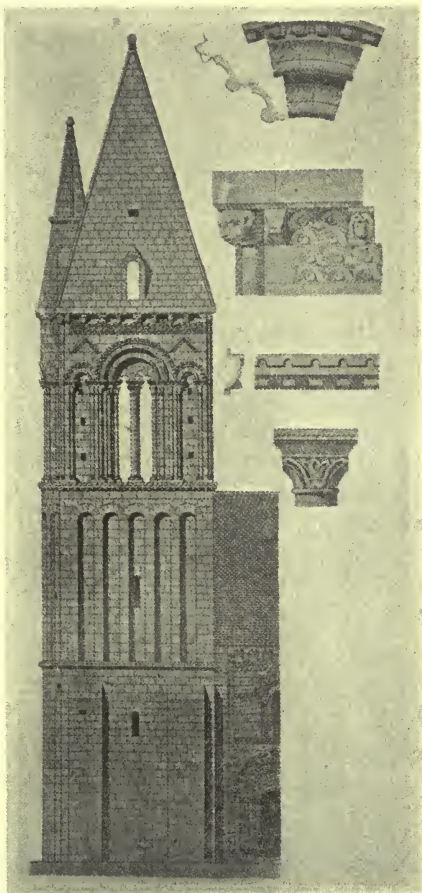


FIGURE 11.—TOWER OF ST. CONTEST.

¹ At Aizier, *ca.* 1040; Fontaine-la-Soret, *ca.* 1100; St. Contest, *ca.* 1130; Douvres, Falaise, and Caen (Abbaye aux Hommes) eleventh century, Caen (Abbaye aux Dames) twelfth century, chevrons are found above the arches at the top of the towers. See Ruprich-Robert, *L'Arch. normande aux XI et XII siècles*.

² Caen Abbaye aux Dames; Greville-Ste.-Honorine (transept). The Norman expression of *opus reticulatum* usually consists of a diaper pattern or "goffering" cut into the face of regularly coursed stone work (see below). It is widely used, especially in the tympana of arches.

severely plain or lean rather toward a Poitevin window treatment, but in one case, the twelfth century façade of the Abbaye aux Dames at Caen, the arches of the upper story are linked by chevrons. The side windows of the nave are too far apart for chevrons and are, moreover, separated by buttresses. Inside, however, at the Cathedral of Bayeux, the succession of juxtaposed arches of the nave arcade has been treated in a way strongly reminiscent of the tower arcades of Cunault.¹ The background is a diaper pattern formed, not of different colored lavas, for Normandy had none, but of stones with shallow carvings on the faces, and between each pair of arches is a little gable, sometimes a simple chevron, sometimes a full tabernacle with a modified modillioned moulding, sheltering a Norman grotesque.²

Norman architecture is certainly better known to English speaking students than that of the eleventh and twelfth centuries in any other section of France. For this reason the details we have been considering have here already received considerable attention. The modillioned moulding, consisting of a square member supported at intervals by small rounded blocks, has been christened the "billet-mould," being supposedly derived from small applied sections of wood. It is generally considered characteristically Norman, possibly originated by Scandinavian wood workers. The very close resemblance to the moulding of St. Jean de Poitiers can leave hardly any question that it is merely a simplified Corinthian cornice.³ The name chevron, too, has been applied primarily to the zig-zag treatment (also called the "*Baton rompu*" or "broken stick" ornament) so prevalent on Norman archivols.⁴ The latter can be traced back to Carolingian archi-

¹ Lasteyrie, *op. cit.* fig. 346.

² Cf. Baum, *Romanesque Arch. in France*, p. 210.

³ Porter, *Mediaeval Architecture*, I, p. 163, states that the billet mould was introduced into France toward the very end of the Carolingian period. If by France he means the Royal Domain, I am inclined to think he sets his date too early; if on the other hand he means the modern area of France, it is evident that he has missed the significance of the mouldings at St. G  n  roux and St. Jean de Poitiers. Lasteyrie, *op. cit.* p. 574, suggests that the billet mould is derived from the classic dentil band, and while this is possible in some cases, it should be observed that the billet mould is most rare in the regions where classic dentils were most frequent, and that while the dentil and the band from which it hangs are regularly cut in one piece, the bands at St. G  n  roux are separate from the blocks which support them, exactly as in a modillioned cornice.

⁴ Bond, *Gothic Arch. in England*, p. 40, Prior, *Hist. of Gothic Arch. in England*, p. 118, and Lasteyrie, *op. cit.* p. 587 ff. use the word solely as a synonym for the

ture, and possibly originates even further back, but it is always an archivolt treatment. It has nothing in common with the detail we have been considering, except its angular form. The use of the name "chevron" or "triangle motive" for both indiscriminately is very confusing.

The story of the pediments in England is curious. Roman architecture in Britain was probably very similar to that in Gaul, though its remains are scarcer. Under barbarian rule it broke down as in France, producing an Anglo-Saxon decoration quite different from that south of the Channel but derived from the same Roman elements. The applied column, which disappeared in France, developed inordinately in England. The curved pediments assumed the form of blind arcades instead of window heads, while the angular pediments multiplied into strap work, much as in France. Mosaic stone work and the modillion band are not to be found, since they involved an elaboration of stone cutting beyond the ability of the Anglo-Saxons. The resultant surface decoration in vertical and intersecting lines is particularly marked on the towers of Barton-on-Humber and Earl's Barton (Fig. 12) which suggests very strongly that the towers of late Roman churches in Britain and probably also in Gaul were decorated with applied orders. This Anglo-Saxon decoration has been often considered to be derived from primitive half-timber construction.¹ Obviously such a theory is based on superficial appearance, not on archaeological research.

With the Norman conquest this native style was wholly replaced by that of the conquerors. But the French chevron did not cross zig-zag moulding. Porter, *op. cit.* in general, uses the word in the same way, but he also considers it a form of the "Carolingian triangular motive" (Vol. I, p. 275) which was found at St. Jean de Poitiers, St. G  n  roux, St. Front de P  rigueux (p. 163) and which was re-echoed on the towers of St. Etienne (Abbaye aux Hommes) Caen, etc. (p. 275, note 3). As "chevron" really indicates the rafters of a gable, it seems to me eminently suitable to the ornament derived from a pediment, wherefore I have restricted it to that, perhaps not usual, meaning, preferring with Lasteyrie the term zig-zag for the continuous broken torus.

¹ Cf. Ferguson, *Hist. of Arch.* II, p. 9, and Power, *English Mediaeval Architecture*, Pt. 1, p. 50; and, on the other hand, Armstrong, *Art in Great Britain and Ireland*, pp. 18-19; Statham, *Short Critical Hist. of Arch.* p. 307, and Fletcher, *Hist. of Arch.* p. 327. Simpson, *Hist. of Arch. Development*, II, pp. 235-236, asserts that this Anglo-Saxon surface decoration was imported from Lombardy, direct or via Germany. Jackson, *Byzantine and Romanesque Arch.* II, p. 193, admits the possibility of this hypothesis. To me it seems not only quite unnecessary but highly improbable.

the Channel with the Normans; instead its course turned eastward and one late vagrant example is to be found, very unostentatious but still unmistakable, between the tower arches of St. Denis. This abbey, rebuilt by Suger in 1140–1144, has been justly called the first Gothic building, for its architect showed a vision and mastery of the new methods of construction far beyond that of the hesitant experimenters who had preceded him. With the rapid revolution which changed the whole appearance of Northern French architecture in the last half of the twelfth century, the



FIGURE 12.—CHURCHES AT EARL'S BARTON AND BARTON-ON-HUMBER.

chevron drops out of sight, except in backward Normandy. It may be, though, that it does not truly die, but rather is transformed into an element which lasts throughout the Gothic age to the reintroduction of the classic pediment by the Renaissance.

The steps of this possible transformation can only be sketched and not clearly shown, for the changes of those years were so amazingly rapid and the region where they occurred has been so continually devastated, from the hundred years war to the present day, that the multiple evidences seen further west in Romanesque development, are not to be found here.

The first hypothetical change which I would suggest would be that the chevron, being wholly meaningless to the tradition-break-



FIGURE 13.—THE CHURCH AT CHELLES.

ing Gothic builders, except as decoration, became a lozenge (Fig. 13).¹ This lozenge was a complete decorative form and filled well the spandril between coupled pointed arches; but still it

¹ In the tower of Chelles (Oise), *Archiv. de la Comm. des Mon. Hist.* I, pl. 7, the lozenge is apparently pierced, but whether this is due to a restoration or was the original state, I cannot say. There are similar pierced lozenges between the pointed arches of the Cloister at Moissac. While these may have been developed from the chevron, it is difficult to trace any sure connection. Quite possibly they were merely a chance ornament suggested by the shape of the spandril they fill, which of course may also be the case at Chelles. The brick architecture of Toulouse not far to the south frequently employs lozenge-shaped windows, but I doubt very much if these are derived from the Gallo-Roman pediment. In the tower of St. Sernin these angular openings occur in the upper stories while the lower stories have round-topped openings, from which it seems probable that this peculiar form is a later invention rather than an ancient tradition. The church of the Jacobins (late thirteenth century) and of Le Taur (fourteenth to fifteenth centuries) at Toulouse and the neighboring church of the Isle d'Albi (fourteenth century) are all rich in angular brick openings (*Archiv. d. Mon. Hist.* V). Were it not that the chevron-shape arcades of the tower of Mauriac (Cantal, Lasteyrie, *op. cit.* fig. 464, rebuilt in 1843) might indicate connection between Auvergnat towers and those of Languedoc, I should unhesitatingly class the Toulousian lozenges and chevrons as a local development of the latter part of the thirteenth century probably due to the use of brick construction.

seemed unnecessarily severe. The next change, therefore, was to a circle or a four petalled rosette, still for no purpose except ornament. Or it is possible that the circle developed from a curved chevron as on the tower of Cunault without the intervention of the lozenge. First used, presumably, on coupled tower windows, it was quickly applied to the arcades of triforium galleries,—the only other place where coupled arches under an enclosing arch leave a bare spandril above. Here, for the sake of lightness, the rosette was pierced clear through instead of being merely surface cut.¹ Then, back in the tower windows again, we find the rosette, first merely pierced and finally glazed.

Up to this time clerestory windows had been simple single lights, one to a bay, but with the growing demand for glass area the coupled arches of triforium and tower were quickly introduced. The pierced rosette expanded here, became complicated, at Chartres almost swamped the two lights beneath, finally it coalesced with them, changing from a group of plate tracery lights to a single line tracery window.² In this form the rosette can be plainly seen above the two pointed window arches all through the middle ages, and from it springs that whole development of elaborate lacework that forms one of the chief charms of Gothic art.

Up to the thirteenth century doors had been simple arches cut in solid walls; now there were built in front of them porches which had perforce to be sheltered with sloping roofs. Here, then, at last we find a feature resembling in form, and identical in function, with the classic pedimented portico from which we started. But archaeologically there is no connection whatever; the ancient architectural function has merely re-expressed itself in a similar form. The true descendant of the classic pediment is the tracery in the windows above.

LEICESTER BODINE HOLLAND.

PHILADELPHIA, PA.

¹ *E.g.* St. Germer (Oise) ca. 1140.

² Moore, *Gothic Architecture*, pp. 155 ff. implies that the compound window is derived from late Byzantine forms. In view of the absence of any connecting links, such a remote origin seems to me dubious to say the least.

GENERAL MEETING OF THE ARCHAEO- LOGICAL INSTITUTE OF AMERICA

DECEMBER 28-30, 1920

THE Archaeological Institute of America held its twenty-second meeting for the reading and discussion of papers at the Johns Hopkins University, Baltimore, December 28, 29, and 30, 1920, in conjunction with the American Philological Association and the Maya Society. Two sessions for the reading of papers were held and there were two joint sessions with the American Philological Association. The Institute was entertained at dinner on December 30 by the Maya Society. The abstracts of the papers which follow were furnished by the authors.

WEDNESDAY, DECEMBER 29. 9.30 A.M.

1. Mr. W. Frederick Stohlman, of Princeton University, *A Group of Sub-Sidamara Sarcophagi*.

In recent years there has been considerable interest in late classic Asiatic sarcophagi, so that today over forty examples are known and catalogued. They at first took their name from the finest of the group, the sarcophagus from Sidamara, now in the Museum of Constantinople. But further study showed that there were divisions within the main group and that one class could be called the Lydian while the other still remained grouped about the example from Sidamara. But in addition to these Asiatic groups there are other groups either Asiatic in origin or derived from Asiatic prototypes, one of which is the Sub-Sidamara group in question. It is formed by a fragment in the Metropolitan Museum in New York, a fragment walled into a tomb in the church of S. Nicola in Bari, and a sarcophagus in the gardens of the Villa Mattei in Rome. There are certain characteristics that bind these monuments one to the other and to the Sidamara sarcophagus. They all have the characteristic capital of the Sidamara group composed of the double volute pressed down over a luxuriant acanthus treated in coloristic fashion. They all have a background composed of an arcade carried on spiral columns, forming a series of niches crowned with the conch shell and with foliate design filling the spandrels, a design found but once in the Sidamara group, viz., on the back of the Sidamara sarcophagus itself. In addition we need go no farther than the Sidamara group to find prototypes for the figures of the Sub-Sidamara group. The Sub-Sidamara group has further ramifications which at the present time we can only indicate. Two

examples, one from the Cemetery of Concordia and the other from the Villa Ludovisi show a fusion of elements derived from the Sidamara and Sub-Sidamara groups. The original group dates from the first half of the third century and the derivatives had their origin before the century came to a close.

2. Dr. Charles Upson Clark, of New Haven, Connecticut, *The Treasure of Pietroasa and Other Gothic Remains in Southeastern Europe*.

No abstract of this paper was received.

3. Professor Michael T. Rostovtzeff, of the University of Wisconsin, *The Origin of the So-called Gothic Style in Jewelry*.

There are two theories on the subject: that of Riegl and Salia, who claim the Central European origin of the Gothic style, and that of other scholars who insist on its oriental provenance. The supporters of the second theory argue that the main features of the Gothic style were elaborated out of oriental models in South Russia, were accepted by the Germans who conquered South Russia in the third century, and brought by them in the period of migrations to Western Europe. Professor Rostovtzeff accepts this second view, and asserts that in the elaboration of the Gothic style the leading part was played not by the Germans, but by the Graeco-Iranian inhabitants of South Russia long before the Germans occupied this country. The results of excavations in South Russia make it possible to follow the development of the main features of this style from the seventh and sixth centuries B.C. to the early Middle Ages or the period of migrations. These main features are: polychromy effected by inset colored stones, the animal style of ornamentation, and the use of pseudo-granulate work for the geometric ornaments. We first notice these particular features in many finds of the sixth century B.C. in South Russia, analogous to contemporary finds in China. The origin of these features must thus be thought to be somewhere in Central Asia. They were brought to South Russia by the Scythians. A revival of the same characteristics may be noted in South Russia, China and Western Siberia in the so-called Hellenistic period. They were spread by the advance both westward and eastward of various Sarmatian tribes which belonged to the same stock as the Scythians. Many finds in South Russia allow us to follow the development of these features from the fourth century B.C. to the third century A.D. In the period of the early Roman Empire the style was adopted by the Graeco-Iranian population of Panticapaeum and became the foundation of the material civilization of the Gothic tribes which conquered Panticapaeum in the third century. The Goths and the Sarmatians in their conquest of Western Europe carried with them this style from the Dnieper to the Danube and from the Danube to Italy, Gaul, Western Germany, Britain, Spain, and Northern Africa, as is shown by many discoveries in these countries similar in all their peculiarities to the pre-German finds in Panticapaeum and South Russia in general.

(Compare the summaries of a series of lectures given by Professor Rostovtzeff at the Collège de France, *R. Arch.*, XII, 1920, pp. 113-114.)

4. Mr. Ernest Dewald, of Rutgers College, *Carolingian Initials*.
No abstract of this paper was received.

5. Professor Henry A. Sanders, of the University of Michigan,
A Papyrus Manuscript of Part of the Septuagint.

No abstract of this paper was received.

6. Miss Mary Hamilton Swindler, of Bryn Mawr College, *Drawing and Design on Greek Vases*.

Inasmuch as the Greeks created the art of drawing as practiced by all modern nations and were masters of design, more attention should be given to the problems of drawing and design on Greek vases. Although the Cretans probably contributed to the Greeks only technical facility and certain Aegean motives, their works should be studied because they show mastery of the elements of good design. The octopus vase from Gournia reveals marvellous adaptation of shapes and lines to the form of the vase, rhythm and fine contrasts of light and dark. From the beginning, the Greeks conventionalized human and animal forms into geometric patterns. These drawings were largely due to the primitive memory picture of the artist. Though they are grotesque from the point of view of proportions and truth to Nature, the designs are effective because of the arrangement and combination of patterns. The orientalizing schools, Ionia and Corinth, introduced many Eastern motives, especially weird and fantastic animal forms borrowed from imported tapestries, ivories and metal. The Ionic school shows elongation of form to suit the zones of ornament and long, graceful lines; it reveals a fondness for landscape motives and symmetry of pattern. Corinth had a variable canon of adaptation for animal forms, compressing them for friezes and lengthening them for panels or the necks of vases. The black-figured period was one of greater invention than is usually recognized. Balance, symmetry, perspective and rhythm were all attacked even in the time of the François crater. The vase in the British Museum which represents Peleus bringing the child Achilles to Chiron, the Fountain vase in Berlin and the interior of the Dionysus cylix by Execias show the excellencies of black-figured drawing and design: delicacy and precision of line, fine balance of masses, rhythm, symmetry and skillful adaptation of designs to spaces. The red-figured technique first gave the artist a real opportunity for freehand drawing. The drawing of Epictetus with its trim outlines, light forms and sober, balanced composition, cannot be excelled. Andocides, in contrast, shows a love for profusion of detail, elaborate lines and rich folds that are characteristic of Ionia. Filling the circle of the interior of the cylix caused the painter much effort: he twisted and turned his forms, and bowed out the arms and legs in movement to accomplish this end satisfactorily. Two figures sometimes pivoted about a central axis or the middle line of the design passed through the central figure of a group of three. Under the influence of the wall painter, Cimon of Cleonae, attention to linear foreshortening caused the artist to represent frequently the back of the figure or the trunk in new and violent attitudes or the leg in front or back view. Euthymides represents the tendency well, and many painters of the late severe style.

This period marks the regarding of Nature and the turning away from the primitive memory picture. The influence of Polygnotus on the vase painter was not a beneficial one, for the most part. The craftsman attempted to follow the mural art too far in introducing perspective and was untrue to the architectonic demands of his art. The Phidian vases with their noble forms arranged in friezes and silhouetted against the background, show better design and drawing. The white ground vases offer the best examples of beauty of outline drawing. Direct observation led occasionally to individualism in the representation of figures and to the rendering of emotion. Shading for modeling the forms was also a sporadic phenomenon. The decline in drawing and design resulted after the middle of the fifth century because the painter understood too well the technicalities of his art and tried to follow the major art too far. The vases become overcrowded, dramatic poses are common and the artist strives after external effects. The best work was achieved when the painter adhered to flat composition and regarded beauty of form. This beauty of form resulted from proportions which probably had a definite mathematical basis.

DECEMBER 29. 8 P.M.

1. Dr. T. Leslie Shear, of Columbia University, *A Marble Head from Rhodes*.

This paper was published in full in the JOURNAL (XXIV, 1920, pp. 313-322).

2. Dr. Charles Peabody, of Harvard University, *The Proposed Prehistoric Foundation in France*.

The Archaeological Institute of America has established schools of study at Athens, at Rome, at Jerusalem and at Santa Fé, New Mexico; it has now been decided by the same Society, in affiliation with the American Anthropological Association, to establish a foundation for Prehistoric Study in France. The impetus towards this action and the inspiration underlying it came from Dr. Henri-Martin, of Paris, a surgeon, mobilized during the war, and an anthropologist of great reputation; he is known especially for his painstaking excavations at the Mousterian site of La Quina, near Angoulême, and for the discovery there in 1911 of a skull, contemporary with the deposit with which it was found, and of pure Mousterian age. He offered to American students on his own initiative and freely some of his own land, for excavation adjoining the site where the skull was found. Acting on this generosity, a joint committee of the two scientific societies took the matter in hand, enlarged it somewhat, obtained the cordial sympathy of the leading French anthropologists, and raised the first year's budget of 21,000 francs. After their report was made, a permanent governing Board from the two societies was appointed at the Christmas Meetings of 1920. This Board is composed as follows: for the Anthropological Association, George Grant MacCurdy, Nels C. Nelson, Charles Peabody; for the Archaeological Institute, William N. Bates, George H. Chase, Wallace N. Stearns. It is hoped that Professor George Grant MacCurdy of Yale University, will accept the Directorship for the first year's work, which will begin July 1st, 1921.

The privileges which a student will have here, besides his duties of travel and study in Paris and the Provinces for a large part of the year, will be threefold, at the site of excavation itself: the benefit of getting down in the dirt himself and pulling out his own specimens; the advantages of a detailed and very intensive study of specimens on the ground, aided by the fine Laboratory at La Quina of Dr. Henri-Martin; and the chance of a comparative study in Prehistoric Archaeology, showing how often the same needs and the same materials on the two sides of the Atlantic, brought forth identity of implement. It is hoped that many students may apply; there is even question of admitting workers for the summer only; they would get at least the benefit of excavation. Names of students who may care to go to France and any questions should be sent to Charles Peabody, Peabody Museum, Cambridge, Massachusetts.

DECEMBER 30. 9.30 A.M.

1. Dr. Emerson H. Swift, of Princeton University, *Imperial Portrait Statues from Corinth*.

This paper will be published in full in a later number of the JOURNAL.

2. Professor David M. Robinson, of the Johns Hopkins University, *Etruscan and Later Terra-cotta Antefixes at the Johns Hopkins University*.

After a brief introduction on antefixes and on the importance of making a complete collection of the numerous but scattered remains of architectural terra-cottas, the paper discussed nine unpublished architectural terra-cottas which were purchased in 1887 and which were exhibited with the paper as well as slides. One is a unique and very interesting mould for a Gorgoneion antefix. A cast was shown which proved the mould to be for making antefixes of the Capua type somewhat like the antefixes illustrated by Mrs. Van Buren in *J. R. S.* IV, 1914, pl. XXXIII, and by Wiegand, *La Glyptothèque Ny-Carlsberg*, pl. 178, No. 4. Probably that illustrated in Minervini, *Terrecotte del Museo Campano*, pl. XXX, 1 (*Jh. Oest. Arch. I.* XIV, 1911, p. 29, fig. 30) came from the Baltimore mould. Two antefixes show the Gorgon's head, one elliptical and of the sixth century, the other of the round bogey bearded type of the early fifth century, similar to specimens in Florence, Berlin, the Museo di Villa Giulia, Naples, etc. Three antefixes of the Maenad or female type, two of the sixth, and one of the early fifth century show a decided development. The first had no shell, the second had a scalloped shell above and lotus buds drooping on the sides and resembles somewhat Wiegand, *op. cit.* pl. 178, No. 5 and specimens in Berlin, Florence, Naples, and the British Museum, mostly from Capua, though one in Florence comes from Satricum. The type is illustrated in Minervini, *op. cit.* pl. VI, 2 (*Jh. Oest. Arch. I.* XIV, 1911, p. 27, fig. 29). The third one of this type has a complete shell or "nimbo baccellato" and the "archaic" smile is less pronounced. On the neck is painted the swastika, and the paint on the other parts on this specimen as on the others is well preserved. Similar specimens are illustrated in Daremberg et Saglio, *Dictionnaire*, s.v. *Antefixa*, p. 286, *Not. Scav.*, 1896, p. 44 (from Satricum) *Mél. Arch. Hist.* XVI, 1896, pp. 157,

158, etc. The family resemblance to the types of Capua is so strong in these six Baltimore antefixes (one a mould) that we can safely call them Etrusco-Campanian and safely credit them with Capua as a provenance. The resemblance to the Copenhagen, British Museum, Naples, Berlin, and other examples from Capua is so clear that, although not from the same mould, their source of inspiration is undoubtedly the same. Even in the case of those from Satricum, Capua is a likely place of manufacture. Capua had a great industry in art objects, especially pottery and bronzes, and was about the only city in ancient Italy to have a factory system. Why couldn't it in Etruscan days have made antefixes or at least moulds and exported them to Satricum and elsewhere?

Two other antefixes in the Hopkins collection are of an entirely different group, simpler and much smaller, from some tomb or small monument, and date from Hellenistic times. They are semi-elliptical and resemble antefixes found at Tarentum. One has a female head like that described in Walters, *Catalogue of Terra-cottas in the Brit. Mus.* D 666. The other has a Hermes head with petasus, much influenced by the Medusa type. The last terra-cotta shown was of an elongated type, representing only half of a fine male head with hair arranged loosely in ringlets. Beyond the nose the terra-cotta is smooth and on the back it is curved. This is hardly an antefix, but is an architectural terra-cotta, probably applied to some corner of a building.

3. Dr. Stephen B. Luce, of the Museum of the University of Pennsylvania, *A Group of Architectural Terra-cottas from Corneto.*

This paper will be published in full in a later number of the JOURNAL.

4. Professor George W. Elderkin, of Princeton University, *Dionysiac Resurrection in Vase Painting.*

This paper will be published in full later.

5. Miss Gisela M. A. Richter, of the Metropolitan Museum of Art, New York, *The Firing of Greek Vases.*

This paper will be published in full later as a chapter of a book entitled *The Craft of Athenian Pottery, an Investigation into the Technique of Black-figured and Red-figured Athenian Vases.*

It is Miss Richter's belief, confirmed by experiment, that Attic vases were decorated in "leather-hard" condition, and were once-fired.

6. Professor Roland G. Kent of the University of Pennsylvania, *A Baffled Hercules.*

A marble head from Sparta, in private possession in Philadelphia, and identifiable by the lion-jaw helmet as a head of Hercules, has been written upon by Bates, *A. J. A.* XIII, 1909, pp. 151-157, Caskey, *B. Mus. F. A.* VIII, 1910, No. 46, pp. 26-28, Hyde, *A. J. A.* XVII, 1913, pp. 461-478. The data of condi-

tion and of provenance may now be given in greater detail than before, with a conjectural history of the fortunes of the statue to which the head belonged. An identification long since made by the owner, but not previously published, is the subject of this paper. The eyes of the head are turned upward and to the left (the spectator's right), which should be motivated. Pausanias, III, 15, 3-5, tells the story of the wounding of Hercules in his first fight with the sons of Hippocoon, and of his escape from them; the story is to illustrate the attitude of an ἀγαλμα Ἡρακλέους ὠπλισμένον which he mentions as in a ἱερόν at Sparta. Now the peculiar direction of the eyes of the marble head would accord with that of the wounded hero, retreating but on his guard; and the expression of the face, if the head be inclined about twenty degrees toward the spectator, accords with this interpretation. The whole statue, if standing erect, would have been not over 54 inches in height; perhaps it stood in a niche shrine beside the highway, facing the city from which the hero is retreating, with backward steps, in a somewhat crouching position.

Miss Georgiana Goddard King, of Bryn Mawr College, furnished the following abstract of a paper which was on the program of the Meeting, but was not read, *The Importance of Sometimes Looking at Things, as exemplified in the Cardona Tomb at Bellpuig and the Retables of Barbastro and S. Domingo de la Calzada.*

I. The tomb of the Viceroy Ramon de Cardona at his death in 1522 was ordered by his widow from Giovanni da Nola. She waited for it nine years. Certain elements suggest Spanish tombs, like that of Martin Vazquez de Arce in Sigüenza: certain other parts are not in Merliano's taste, but more like the Ribera monuments by Antonio de Aprile and Pace Gazini of Genoa in the University church at Seville. It has been removed twice, which would explain some alterations: it was probably executed in Genoa from inadequate drawings. Vasari speaks of a nameless Spaniard competing in Naples with Girolamo da Santacroce, which would explain the Spanish traits: Giovanni's tomb for D. Pedro de Toledo is strikingly Spanish in style and was intended to be carried into Spain. The putti at the base at Bellpuig, and the Madonna on top, are in Giovanni's best style.

II. The later work of Damian Forment was discussed in *The Way of S. James*, I, pp. 421-427. The author visited Barbastro last summer to see the retable there; Forment left it unfinished and his daughter sold the reliefs to a pupil of his, Juan de Liceire, in 1560. He, in turn, got no further than the base: the upper part is of the dawning seventeenth century and the date 1602 occurs twice in the completed structure. In the design of the rich Renaissance framing of the predella scenes, which resembles Tudelilla's decorations at Saragossa, the date 1560 occurs twice. Forment had planned something like his four of the Pilar (1511) and S. Pablo (1524), at Saragossa, Huesca cathedral (1520) and Montearagon near by and strictly contemporary, rather than like Poblet (1527). He grew purer and more exquisite, and Berruguete copied a figure after him. The Barbastro dates and the pictures taken this year at S. Domingo de la Calzada, explode the theory that he ever imitated Berruguete or worked in the Rioja. Doubtless he died in Huesca in 1533.

ARCHAEOLOGICAL NEWS¹

NOTES ON RECENT EXCAVATIONS AND DISCOVERIES; OTHER NEWS

SIDNEY N. DEANE, *Editor*
Smith College, Northampton, Mass.

GENERAL AND MISCELLANEOUS

AMERICAN FOUNDATION FOR PREHISTORIC STUDIES.—At a meeting of the Governing Board of the American Foundation in France for Prehistoric Studies, held in New York, February 3d, 1921, Professor George Grant MacCurdy was elected first Director of the Foundation. Dr. Charles Peabody is Chairman of the Board and for the present will also serve as Treasurer. The year's work will open at La Quina (Charente) on July 1st. After a stay of three months at La Quina, there will be excursions in the Dordogne, the French Pyrénées and to the Grimaldi caves near Mentone. The winter term will be in Paris; and the work of the spring term will include excursions to the important Chellean and Acheulian stations of the Somme valley, to neolithic sites of the Marne or other suitable locality, and to Brittany for a study of megalithic monuments. Students may enroll for an entire year or for any part thereof. Those who contemplate entering for either the year or the first term, should communicate immediately with the Director, at Yale University Museum, New Haven, Connecticut; or with Dr. C. Peabody, Peabody Museum, Cambridge, Massachusetts. One Foundation scholarship of the value of 2,000 francs is available for the first year. The special qualifications of the applicant, together with references should accompany each application. The Foundation is open to both men and women students. The address of the Director after June 15th will be care of Guaranty Trust Company, Paris.

A BIBLIOGRAPHY OF ISLAM.—In *R. Hist. Rel.* LXXX, 1919, pp. 271-353, RENÉ BASSET gives a bibliography of recent periodical articles (1914-1918) relating to the history, geography, art, folk-lore, religion, and literature of Mohammedan countries. The titles are accompanied by brief descriptions of the contents.

BULGARIA.—Thracian Art.—In *Röm. Mitt.* XXXII, 1917, pp. 21-73 (pl.), B. FILOW describes in detail recent finds in Southern Bulgaria, mostly dat-

¹ The departments of Archaeological News and Discussions and of Bibliography of Archaeological Books are conducted by Professor DEANE, Editor-in-charge, assisted by Professor C. N. BROWN, Miss MARY H. BUCKINGHAM, Dr. T. A. BUENGER, Professor HAROLD N. FOWLER, Professor HAROLD R. HASTINGS, Professor ELMER T. MERRILL, Professor LEWIS B. PATON, Professor A. S. PEASE, Professor S. B. PLATNER, Professor JOHN C. ROLFE, Dr. JOHN SHAPLEY, Professor A. L. WHEELER and the Editors—

No attempt is made to include in this number of the JOURNAL material published after December 31, 1920.

For an explanation of the abbreviations, see pp. 108-109.

ing from the fourth century B.C. Stylistically they fall into three groups: (1) purely Greek, probably importations from Amphipolis, etc.; (2) barbaric imitation of Greek motives showing strong Ionian influence; (3) barbaric, being fantastic combinations of conventionalized forms, mostly derived from animals, which have lost their original meaning. This third group is connected with Scythian and primitive Siberian art. It dies out in Thrace during the third and second centuries B.C. under the influence of Greek civilization.

CONSTANTINOPLE.—Recent Architectural Discoveries.—Discoveries due to a fire in Constantinople are briefly reported in a letter of Mr. PAPADOPOULOS, quoted in *C. R. Acad. Insc.* 1920, p. 23. These include remains of the palace of Daphne, behind the Mosque of Sultan Achmet, and of an annex to this palace, possibly the *Kaivópyειον*. There are also parts of another building which may be the triklinos of Justinian II.

NECROLOGY.—Hugo Bluemner.—Hugo Bluemner, the author of the *Technologie und Terminologie*, was born in Berlin in 1844 and died at Zürich, January 1, 1919, where he had taught since 1877, and where he was also director of the University Museum of Archaeology. He was the author of numerous books and articles on ancient life and handicrafts. (*S. R.*, *R. Arch.* XII, 1920, p. 95.)

F. Imhoof Blumer.—The distinguished numismatist, F. Imhoof Blumer, died at Winterthur in April, 1920, at the age of sixty-two. He was the author of numerous works on Greek coins, and collaborated with Professor Percy Gardner in the *Numismatic Commentary on Pausanias*. He formed two collections of coins, one of which he sold to the Berlin Münzkabinett. (*S. R.*, *R. Arch.* XII, 1920, p. 94.)

Marcel Dieulafoy.—Born at Toulouse in 1844, Marcel Dieulafoy was by original profession an engineer. Professional occupation in the orient awakened in him an interest in archaeology which led to the production of numerous works on a wide variety of subjects, including Persia and Mohammedanism, Biblical problems, classical and oriental antiquities, military history, and the art and literature of Spain and Portugal. He died in Paris, February 26, 1920. (*S. R.*, *R. Arch.* XI, 1920, pp. 363-364.)

Heinrich Dressel.—Heinrich Dressel died on July 17, 1920. He was born in Rome in 1845. As a student in Greece he collaborated with Milchhöfer in the collection and description of Spartan antiquities. He was editor of a section of the *C. I. L.* In 1885 he was called to a position in the Ancient Section of the Berlin Münzkabinett, and after Von Sallet's death in 1898 became director of this section. He was co-editor of the *Z. Num.*, and directed the undertaking of a *Corpus Nummorum Antiquorum*. (*Ber. Kunsts.* XLI, 1920, pp. 235-240.)

Joseph Germer-Durand.—Born at Nîmes, September 24, 1845, Joseph Germer-Durand inherited an interest in archaeology from his father, a professor in the University. In 1887 he became the first Superior of the Hôtellerie de Notre-Dame de France at Jerusalem. The Abbé Germer-Durand interested himself especially in the Roman and Byzantine remains of Palestine; he conducted excavations on Mount Zion, and made a valuable collection of antiquities which was installed in a museum in the Hôtellerie. He contributed to the reviews numerous articles on the archaeology of Palestine. He died at San Remo, September 28, 1917. (*L. DRESSAIRE*, *R. Arch.* XII, 1920, pp. 92-94.)

Gherardo Gherardini.—Gherardo Gherardini was born in 1855, and died June 10, 1920 at Bologna, where he was professor in the University and director

of the Museo Civico. Most of his archaeological study was devoted to pre-Roman Italy, and his best-known publication was on Italic *situlae*. (S. R., *R. Arch.* XII, 1920, p. 94.)

Thomas Dwight Goodell.—Born at Ellington, Connecticut, November 8, 1854, Thomas Dwight Goodell was Professor of Greek in Yale University from 1893 until his death at New Haven on July 7, 1920. In 1894–1895 he was professor in residence at the American School in Athens. He gave special attention to dramatic and lyric poetry and to the study of Plato. His *Chapters on Greek Metric* is one of his most important published works. He left a completed book on the Athenian drama, which is now in the press. (*Yale Alumni Weekly*, September 24, 1920, p. 6; C. W. MENDELL, *A. J. P.* XLI, 1920, pp. 406–407.)

Paul Lejay.—Paul Lejay was born in May, 1861, and died in June, 1920, a few months after his election to membership in the Académie des Inscriptions. He was Professor of Philology in the Institut Catholique in Paris, and most of his publications are concerned with ecclesiastical history. He also published a collection of Latin inscriptions of the Côte d'Or, and classical text-books. (S. R., *R. Arch.* XII, 1920, pp. 90–91.)

Bernadotte Perrin.—Bernadotte Perrin was born at Goshen, Connecticut, September 15, 1847, and died at Saratoga Springs, New York, August 31, 1920. He was Professor of Greek in Yale University from 1883 to his retirement in 1909. In his later years his interest was concentrated on the ancient historians and the application of the principles of source-criticism to them. His chief work was his translation of Plutarch in the Loeb Classical Library. (*Yale Alumni Weekly*, September 24, 1920, p. 6; E. P. MORRIS, *A. J. P.* XLI, 1920, pp. 405–406.)

Paul Pierret.—Paul Pierret (1836–1916) was curator in the Musée Égyptien du Louvre, 1873–1905, and Professor of Egyptian Archaeology at the École du Louvre, 1883–1905. His published works include *Dictionnaire d'archéologie égyptienne*, 1875; *Vocabulaire hiéroglyphique*, 1878; *Recueil d'inscriptions inédites du Musée Égyptien du Louvre*, 1874–1878. (P. ALPHANDÉRY, *R. Hist. Rel.* LXXIX, 1919, pp. 353–354.)

Frank Bigelow Tarbell.—Professor Tarbell, who died at St. Raphael's Hospital, New Haven, Connecticut, on December 4, 1920, in his sixty-eighth year, was a graduate of Yale College (1873) and received the degree of Ph.D. from Yale in 1879. He was tutor and assistant professor of Greek at Yale from 1876 to 1887. In 1888–1889 he was director of the American School at Athens, and for three years was on the classical faculty of Harvard University. In 1892 he was appointed director of the American School at Athens for a term of five years, but was released from this appointment after a year of service to accept an associate professorship of Greek at the University of Chicago, where in 1894 he was appointed Professor of Classical Archaeology. He held this post until his retirement in 1918, and has since lived at Pomfret, Connecticut. As an archaeologist especially interested in the history of art, he was distinguished for his taste and his sound judgment. He was the author of numerous articles on subjects in Greek archaeology, and of a handbook on the history of Greek art which is very generally used in American colleges. (*Yale Alumni Weekly*, December 24, 1920, p. 335.)

NEW REVIEWS.—Messrs. Bestetti and Tumminelli of Milan began in June the publication of *Dedalo*, a monthly review of art, edited by Ugo Ojetti.

This abundantly illustrated periodical is devoted mainly to mediaeval, Renaissance, and modern art, but does not exclude contributions on classical art.

In the *Literary Supplement* to the London *Times*, December 16, 1920 it is announced that the Society of Antiquaries is about to publish a new journal to be known as the *Antiquaries' Journal*. The first number will appear early in 1921.

EGYPT

TELL EL-KEBIR.—A Nabataean Inscription.—A Nabataean inscription discovered near Tell el-Kebir in Lower Egypt is the subject of careful commentary and interpretation by C. CLERMONT-GANNEAU in *R. Hist. Rel.* LXXX, 1919, pp. 1-29 (pl.; fig.). It records a dedication in behalf of an unnamed person, whom the editor believes to have been Philopator XIV, or Philopator XV, or Caesarion, the son of Cleopatra.

THEBES.—The Tomb of Kha.—An Egyptian tomb in a deserted little valley of the Libyan chain near the plain of Thebes, excavated in 1906 by the Italian archaeological mission, is described by E. SCHIAPARELLI in *Rass. d'Arte*, VII, 1920, pp. 1-4 (pl.; 3 figs.). The vaulted tomb, which had never before been entered since the sixteenth century B.C., contained, besides many articles of furniture, the sarcophagus of Kha, superintendent of public works under Thothmes III, and that of his wife, Mirit. But the most notable monument in the room is a wooden statuette of Kha, perfectly preserved and in the quality of its workmanship a specimen of the best Egyptian art of the eighteenth dynasty.

BABYLONIA

The Sumerian Law-Code and the Code of Hammurabi.—It was long suspected that the Semitic law-code of Hammurabi was based upon Sumerian originals, since about sixty tablets containing legal decisions from the period of the dynasty of Ur were known. Several fragments of Sumerian law-codes have recently been discovered. These S. Langdon collects and publishes in transliteration and translation in *J. R. A. S.*, 1920, pp. 489-514. With rare exceptions the Sumerian laws are not exact originals of those in the Semitic code; still the two codes resemble each other much in content and phraseology, and Sumerian law was obviously the forerunner of Semitic legislation.

SYRIA AND PALESTINE

PALMYRA.—Inscriptions.—In the spring of 1914 Professors Jaussen and Savignac of the École Biblique in Jerusalem undertook an expedition to Palmyra in order to secure inscriptions for the projected new *Corpus* of Palmyrene inscriptions. The account of the expedition and of the new inscrip-

tions that were discovered appears now for the first time in *R. Bibl.* XXIX, 1920, pp. 359-419 (3 figs.).

ASIA MINOR

SAMOS.—Epigraphical Discoveries.—Inscriptions discovered by the expedition of the Berlin museums to Samos (1910-) and ranging in date from the fourth century B.C. to the Imperial period are the basis of a sketch of Samian history by M. SCHEDE in *Ber. Kunsts.* XLI, 1920, pp. 117-131. The most interesting is a decree in honor of Polus, a celebrated actor who took part in the Samian celebration of the victory of Demetrius in 306 B.C.

GREECE

EPIDAUROS.—Recent Excavations.—In the new Athenian review, *L'Acropole*, I, 1920, pp. 5-14 (3 pls.) P. CAVVADIAS gives an untechnical report of the results of excavations at Epidaurus in 1916 and 1918. Near the Propylaea, and on the site of the little church of St. John he discovered the remains of a basilica. The central part of its pavement is of mosaic. It is approached through a rectangular court the orientation of which is not identical with that of the basilica; access to this is gained through three doors in the centres of the north, west, and south sides. A small villa adjoins the basilica at the north. Its vestibule is a prolongation of that of the basilica. This room is paved with fine mosaics. Many inscriptions have also been found. One, dated by Cavvadias 223 B.C., records amendments to the constitution of the Achaean League incident to the admission of the Macedonians and their allies to the League; a second gives a list of the *nomographi* of the League, a third the text of a treaty made between the Epidaurians and the Achaean League on the admission of Epidaurus (242 B.C.); and a fourth is an inscription in honor of Archilochus, who negotiated a treaty of alliance with Rome for the Epidaurians.

MYCENAE.—Recent Excavations.—In the *Literary Supplement* of the *London Times*, August 20, 1920, p. 530, A. J. B. Wace completes an informal report on the recent excavations of the British School at Mycenae (see *A. J. A.* XXIV, 1920, pp. 293 f.). The excavation of the granary was completed. The discovery here of gold ornaments similar to those of the royal graves led to the finding of a shaft grave under this building. Its contents had been removed, apparently in the Third Late Helladic period (1400-1200 B.C.), but a number of small ornaments and vase-fragments were found. It is conjectured that when the royal graves were enclosed, after 1400 B.C., contents of some graves which were outside the circle were removed to a position within the circle. Some of Schliemann's and Tsountas's discoveries seem to confirm this view. Another interesting discovery in this region was that of a deep well between the northwest angle of the House of the Warrior Vase and the Cyclopean wall. The South House, not yet completely excavated, shows traces of wooden ties set in the stone base of its walls to support the crude brick super-

structure. Doors and thresholds were of wood. Traces of a staircase were observed, and fragments of the flat roof, made of cement over a layer of clay laid on branches of trees, were discovered. The palace on the acropolis was reëxamined. The removal of a part of the foundations of the Doric temple on this site yielded an archaic sculptured fragment from a metope of the temple. It was found that the palace was built in terraces on the south slope, and had two floors. It is possible that the principal rooms were on the higher level, for several large Mycenaean column-bases were found among the ruins of the temple. In the vestibule of the megaron was a cement floor with colored geometric decorations, surrounded by a border of gypsum slabs imported from Crete. Many calcined fragments of painted plaster from upper walls were found in the same room. The fragments of pottery discovered here were from undecorated vases of the last Mycenaean period (1400-1200 B.C.). Below the level of the courtyard Middle Helladic pottery (2000-1600 B.C.) was found. Pottery of the later Helladic period (1600-1400 B.C.) is lacking. Perhaps remains of this period were swept away when the palace was built. In the search for the debris of the palace construction an area near the ramp which leads up from the Lions' Gate was examined. Here was a well filled with rubbish, in which fragments of terra-cotta vases and of carved stone vases, intended for libations, were found. There may have been a shrine near by. In the investigation of walls close under the ramp south of the Grave Circle fragments of painted plaster showing a bull and acrobats were discovered, together with vase fragments of the Late Helladic period (1600-1200 B.C.), suggesting that the earlier palace was not on the summit of the Acropolis, but further down the slope and not far above the royal graves. The excavations, though not rich in finds of artistic value, have been of great historic interest. It appears that the first settlement of Mycenae was in the Early Helladic period (2500-2000 B.C.). In the Middle Helladic period (2000-1600 B.C.) it was a flourishing city. In the first phase of the Late Helladic period (1600-1400 B.C.) Mycenae was a rich and powerful state: to this period belong the treasures of the shaft graves. The situation of the palace of this period is still uncertain. In the last phase of the age (1400-1100 B.C.), the "Mycenaean" period *par excellence*, a powerful dynasty constructed the Cyclopean wall with the Lions' Gate, replanned the city, and built the domed tombs and probably the palace on the summit of the Acropolis.

ITALY

ARCHAEOLOGICAL DISCOVERIES IN 1920.—In the *Literary Supplement* of the *London Times*, December 2 and 16, 1920, is a review by THOMAS ASHBY of archaeological research in Italy during the past year. In Rome, it has been shown that the round reliefs on the Arch of Constantine belong to the period of Hadrian. Remains of the Porticus Octavius, erected by Cnaeus Octavius a little after 168 B.C., and restored by Augustus, have been discovered in the Piazza S. Nicola a Cesarini. A subterranean tomb with paintings of the second century A.D., including one of a walled city, has been found in the Viale Manzoni. At Veii the temple in which the now well-known terra-cotta

figures were discovered has been more thoroughly investigated. It had three cellae, and north of it was an open tank supplied from a spring which probably had special sanctity or healing qualities. The terra-cotta figures are probably from a group of four, representing the stealing by Heracles of a stag sacred to Apollo, with Hermes and another figure (Artemis?) as spectators. The great storehouse at Ostia, described by Dr. Ashby in his report of 1919, has been more thoroughly investigated and other storehouses discovered. Another Mithraeum (the fifth at Ostia) has been found. A large hall near the so-called Temple of Vulcan was probably an Augusteum. A courtyard, an adjoining peristyle, and a semicircular building of late date, originally excavated in the time of Pius VII, have been re-excavated. Investigations at Ostia have thrown new light on Roman domestic architecture. The common type of house at Ostia resembles the modern apartment house more than the typical Pompeian house. At Tivoli the ancient *mensa ponderaria*, dedicated by Varenus Diphilus, a freedman, has been found; and an adjoining hall dedicated by the same man. At Hadrian's Villa remains north of the so-called Poikile have been identified as baths. The villa of Domitian at Castelgondolfo has been studied by Lugli. It includes a little-known private theatre in which there are fragments of fine stucco relief. A curious marble relief with Egyptian scenes was found in a tomb near Albano. At Arezzo part of the brick city wall described by Vitruvius has been found. Its date is the last quarter of the fourth century B.C. or later; it was destroyed not later than 81 B.C. Prehistoric flints and pottery have been found in caves and rock shelters in the region of Falerii, and seem to date from the Mousterian period. At Pompeii work continues along the line of the Strada dell' Abbondanza. Funds have been allocated for the excavation of Herculaneum.

ALBANO LAZIALE.—An Imperial Portrait.—In *Not. Scav.* XVI, 1919, pp. 355 f., R. PARIBENI publishes an imperial bust of the type of Marcus Aurelius and Commodus. He is inclined to consider it a portrait of Commodus.

BOLSENA.—Inscriptions.—In *Not. Scav.* XVI, 1919, pp. 206–209, G. BENDINELLI publishes nine inscriptions from Bolsena, of which eight are fragmentary.

CIVITAVECCHIA.—The Terme Taurine.—In *Not. Scav.* XVI, 1919, pp. 209–231, A. MENGARELLI describes excavations in the so-called "Baths of Trajan," more properly the Terme Taurine, three miles from Civitavecchia. The place is still the site of hot springs, which were used from remote antiquity; the Aquenses Taurini of Pliny, *N. H.* 3, 5 took their name from them. The recent excavations completely uncovered the baths, of which a plan is given. Inscribed tiles were found to the number of 29. Of these one belongs to the year 59 A.D.; all the others to two periods: that of the building of the port of Trajan and of Centumcellae, and the reign of Hadrian. The antiquities, along with those previously found in the neighborhood, have been assembled in a local museum. Forty-two Latin and Etruscan inscriptions are published for the first time.

FERENTO.—Inscriptions.—In *Not. Scav.* XVI, 1919, pp. 281–283, G. BENDINELLI publishes ten fragmentary inscriptions.

FLORENCE.—Unpublished Sculpture in the R. Museo Archeologico.—In *Boll. Arte*, XIV, 1920, pp. 40–48 (8 figs.), A. MINTO publishes, in the form of a critical catalogue, a number of Greek and Roman sculptures that have been

acquired from private collections or through recent archaeological discoveries by the R. Museo Archeologico, Florence.

GROTTE SANTO STEFANO.—A Roman Necropolis.—In *Not. Scav.* XVI, 1919, pp. 280–281, G. BENDINELLI gives an account of a Roman necropolis with sarcophagi and inscriptions.

ISOLA DEL GIGLIO.—Roman Remains.—In *Not. Scav.* XVI, 1919, pp. 275–279, P. RAVEGGI describes Roman remains at Castellare and Bagno del Saraceno, comprising walls and some handsome pavements in marble and in mosaic.

IVREA.—A Roman Aqueduct.—In the *Bollettino della Società Piemontese di Archeologia e Belle Arti*, III, 1919, pp. 49–53 (2 figs.), G. BORGHEZIO and G. PINOLI describe the structure of remains of the Roman aqueduct which supplied the city of Ivrea, and trace its course to a reservoir which at one time existed on the site of the present Maresco di Bienca. A branch of this aqueduct furnished a constant flow of water to the Lago Sirio, from which water-power was transmitted to mills between this lake and the Lago S. Michele.

LANUVIUM.—L. Catilius Severus.—In *B. Com. Rom.* XLVI, 1918, pp. 165–168, ALBERTO GALIETI publishes a fragment of an inscription from Lanuvium which gives evidence that L. Catilius Severus was consul for the first time in 115 A.D. as successor of Paedo Vergilianus, who died in office.

Inscriptions.—In *Not. Scav.* XVI, 1919, p. 231, A. GALIETI publishes four fragmentary inscriptions from Lanuvium.

MAGLIANO.—An Inscription.—In *Not. Scav.* XVI, 1919, pp. 199–206, A. MINTO publishes an inscription found near Magliano in Etruria, which locates the town of Heba. This place is mentioned by Ptolemy the geographer and is apparently the same as *Herbanum oppidum* of Pliny, *N. H.* 3, 52. The inscription, which Minto assigns to the second half of the first century, or the beginning of the second century, of the Empire, is dedicated by the Augustales to the genius of Heba. It contains the rare abbreviation *cru.* for *crustulum*. Minto recapitulates previous finds in the neighborhood of Magliano, which appears to have fallen under the hegemony of Vulci just before the Roman conquest.

OLIVETO LUCANO.—A Lucanian City.—In *Not. Scav.* XVI, 1919, pp. 243–260, V. DI CICCIO gives an account of excavations conducted in 1905–7 and 1912–13 at Monte Croccia-Cognato, on the site of an ancient Lucanian city of which the name is not known. Good-sized portions of a well-built city wall were uncovered and pottery was found of two varieties: vases with geometric ornamentation in red and black, belonging to the eighth century B.C.; and red-figured vases with covers of late Italic, perhaps Lucanian, manufacture.

OPPEANO VERONESE.—Remains of Lake Dwellings.—In *Not. Scav.* XVI, 1919, pp. 189–198, ALFONSO ALFONSI gives an account of the excavations conducted by the late Professor Giuseppe Pellegrini at Feniletto. This place is about five kilometers west of Oppeano on the southern end of an ancient lake or pond, the bottom of which now consists of peat-beds. There were found some 225 piles covering an area of 50 by 33 metres. The piles, which were 3 metres in length, had been shaped and provided with a blunt point by means of some metal instrument. There were also found utensils in terracotta, a copper dagger, stone implements, and pieces of wood which had apparently been prepared for kindling fires by friction.

PIEDMONT.—Neolithic Axes.—In the *Bollettino della Società Piemontese di Archeologia e Belle Arti*, III, 1919, pp. 16–22 (4 figs.), P. BAROCELLI describes neolithic axes and hatchets found on various sites in Piedmont. The evidence is not sufficient to establish their chronology.

POMPEII.—Inscriptions.—In *Not. Scav.* XVI, 1919, pp. 232–242, M. DELLA CORTE publishes eighty-six inscriptions, many of which are election notices. An amphora handle has the name of the consul T. Catius, better known as Silius Italicus.

ROME.—The Arch of Constantine.—In *B. Com. Rom.* XLVI, 1918, pp. 161–164 (pl.) C. GRADARA publishes an excerpt from the diary of Pietro Bracci for the year 1732 in which he states that he carved new heads for seven of the Dacian slaves surmounting the columns on the Arch of Constantine, and made an entire new statue for the eighth (right of centre, south side). He also made new heads for the emperors and other personages on the reliefs between these slaves.

The Capitoline Hill.—In *Rass. d'Arte*, VII, 1920, pp. 9–11 (pl.; 4 figs.), are published the plans which Lodovico Pogliaghi and Corrado Ricci have worked out for the improvement of parts of the Capitoline Hill. The intention is not only to enhance the picturesque effect but also to bring out the historical value of the various parts. A fuller account of the work is given in *Boll. Arte*, XIV, 1920, pp. 49–72 (5 figs.).

Excavations on the Via Ostiense.—In *Not. Scav.* XVI, 1919, pp. 285–354, G. LUIGLI gives a detailed and fully illustrated account of recent excavations in an extensive Roman sepulcretum on the Via Ostiense, near the church of S. Paolo. The sepulcretum, which was first discovered in 1897, yielded a large number of tombs, many of which were handsomely decorated with paintings and reliefs, together with ninety-three inscriptions. The tombs are assigned to four periods: the Republican and Augustan; the Imperial period to the end of the second century; the third and fourth centuries; and a later period extending into the Middle Ages.

Inscriptions from the Via Clodia.—In *Not. Scav.* XVI, 1919, pp. 283–284, R. PARIBENI publishes three inscriptions found between the fifth and sixth kilometers of the Via Clodia, one of which is surmounted by a portrait bust in relief.

TALAMONE.—Miscellaneous Finds.—In *Not. Scav.* XVI, 1919, pp. 261–295, TINA CAMPANILE gives an account of discoveries at Le Tombe and Santa Francesca in Talamone. The finds include an inscribed lead pipe of Trajan, two pipes of pottery, coins, and pieces of Arretine ware of a late period, one of which has a representation of the flaying of Marsyas.

TAORMINA.—A Siculan Necropolis.—In *Not. Scav.* XVI, 1919, pp. 360–369, P. ORSI tells of the discovery of a Siculan necropolis at Corcolonazzò di Mola, consisting of fourteen tombs of different forms. Pottery and small objects in bronze and glass-paste were found.

VASTE.—Messapian Tombs.—In *Not. Scav.* XVI, 1919, pp. 358–360, G. BACILE DI CASTIGLIONE tells of the discovery at Vaste of four Messapian tombs with small vases and two stelae, one of which is inscribed with a name.

VETULONIA.—Objects found at Poggio di Colonna.—In *Ausonia*, IX, 1919, pp. 11–54 (2 pls.; 34 figs.) L. PERNIER discusses antiquities discovered on the site of Vetulonia: (1) a deposit of bronze helmets, including more than 100 in a fair state of preservation, and fragments of many others. They are of

the type which Schröder has called Italic, but which Pernier, comparing them with the famous helmet dedicated by Hiero at Olympia, thinks may more properly be called Etruscan, and are to be attributed to the third or fourth



FIGURE 1.
SILENUS FROM KOTTABOS
STAND: VETULONIA.

century B.C. Their condition shows that they had been deliberately injured, possibly in order to make them useless to an invading enemy, or in a religious ceremony performed by the invaders. (2) Not far from the deposit of helmets were found the fragments of a Greek *kottabos* stand. This had also been intentionally broken, and was considerably corroded, but the essential parts were preserved. The small disc at the top was supported by a spirited little silenus, which Pernier thinks is possibly a copy or adaptation of a Myronic type (Fig. 1). (3) To the west of the paved street which leads south from the *decumanus* of Vetulonia were discovered fragments of terracotta sculptures which ornamented a small building. They show traces of fire. The fragments include youthful male and female figures, a herm and an altar, a representation of a ship in the sea, and of a lion's head fountain. They were probably parts of a frieze, and seem to have represented a scene of surprise and capture, such

as the raid of Odysseus on the Cicones. On stylistic grounds Pernier attributes them to the third century B.C., the best period of Etrusco-Roman art.

SPAIN

BOLONIA.—Excavations on the Site of Belo.—In *C. R. Acad. Insc.* 1919, pp. 450–462 (2 figs.) P. PARIS describes the excavations conducted at Bolonia by the *École des Hautes Études Hispaniques* in 1919: (1) In the industrial quarter near the sea the remains of houses and of trenches, halls, and cisterns connected with the salt fish industry were discovered. (2) The excavation of a mound brought to light the gate of two squared bastions by which the Roman road entered Belo. At some date later than its construction it had been roughly barricaded with blocks of unhewn stone. (3) The site of the forum, paved with large slabs, has been recognized, but not yet fully excavated. (4) Behind the monumental fountain discovered in 1917 were found the remains of three Corinthian temples on high podia, constituting the Capitol of the Roman colony. Much use was made of stucco in the finish of walls and columns. Two fine lions' heads which served as consoles in one of these buildings were also finished in this material. Between the central temple and the fountain, and in the axis of the temple, was a platform supporting two altars of cubical form,

of which the *pulvini* were in stucco, delicately ornamented with Ionic palmettes. Fragmentary statues were found in the cellae of the temples, but give no certain evidence of the deities to whom the temples were dedicated. (5) Numerous small objects were found in the necropolis: glass, pottery, bronze utensils and amulets. Many primitive busts which reflect an indigenous cult, were found. There is a great variety of coffins and urns. Both inhumation and incineration were practised.

FRANCE

ARLES.—*Inscriptions.*—A series of inscriptions from Arles is published by L. CONSTANT in *R. Ét. Anc.* XXII, 1920, pp. 172–186. An inscription on the podium of the amphitheatre (*C. I. L.* XII, 697) is reconstituted with the aid of two recently discovered fragments. It records the gifts of C. Junius Priscus to the basilica and the amphitheatre of Arles, and thus proves the existence of the basilica which has hitherto been a subject of conjecture. M. Constant publishes sixteen new inscriptions, and new readings of the following: *C. I. L.* XII, 786, 680, 682, 779, 764.

ENSÉRUNE.—*Recent Excavations.*—In *C. R. Acad. Insc.* 1920, pp. 31–37 (3 figs.) E. POTTIER describes briefly the objects discovered by F. Mouret in excavations at Ensérune. There are several classes of pottery belonging to the Graeco-Iberian period: (1) local white-slip ware with conventional decoration in black and red, (2) a sort of local bucchero, (3) Gnathian vases, used as cinerary urns, (4) Campanian plates. An unusual plastic vase, with a strainer at the top and an opening at the back, was found. Architectural and sculptural fragments show that in the Roman period this part of the coast was occupied by villas.

ISTURITZ.—*A Prehistoric Bone-carving.*—In *C. R. Acad. Insc.* 1920, pp. 28–31 (2 figs.) E. PASSEMARD reports the discovery in a cave at Isturitz (Basses-Pyrénées) of a rude image of an animal of feline species carved in reindeer horn, curiously perforated and engraved with representations of harpoons, to which a magical significance was probably attached.

NÎMES.—*An Inscription on the Maison Carrée.*—A new examination of the holes for the attachment of bronze letters on the façade of the Maison Carrée, reported in *C. R. Acad. Insc.* 1919, pp. 332–338, leads É. ESPÉRANDIEU to the conclusion that antecedent to the inscription read by Séguier in 1758, recording the dedication of the building to Gaius and Lucius Caesar, was another inscription, marking the building as the gift of Marcus Agrippa to the people of Nemausus. This discovery, examined in connection with the known fact of Agrippa's visit to Nemausus in 20 B.C., indicates that the construction of the building was begun at this date, and completed before 12 B.C., the year of Agrippa's death. The second inscription, in honor of Agrippa's sons, is to be dated ca. 1–4 A.D.

PARIS.—*An Egyptian Statue.*—In *Gaz. B.-A.* I, 1920, pp. 313–318 (pl.; fig.), G. BÉNÉDITE publishes a silicon statue of the chief of the prophets, Amenem-hat-ânk, recently acquired by the Louvre. This priest of high rank lived in the reign of Amenophis III, whose beautiful statue is the pride of the museum of Berlin. The statue of the priest is small, but it has all the dignity of a work

of heroic size, thus combining the two extremes of sizes given to the sculptures carved in the period of transition to which it belongs, the Middle Empire.

A Statuette of Jupiter Heliopolitanus.—In *Syria*, I, pp. 3-15 (4 pls.; 3 figs.) a bronze statuette of Jupiter Heliopolitanus (Fig. 2), discovered at Baalbek,



FIGURE 2.—STATUETTE OF JUPITER
HELIOPOLITANUS: PARIS.

and now in the collection of M. Charles Sursock, is the subject of a detailed study by RENÉ DUS-SAUD. The figure stands on a cubical base, which is flanked by figures of bulls supported by a wider pedestal. The god, a beardless figure, is crowned with a *calathos*, and wears over a chiton a sort of cuirass reaching nearly to the feet, and divided by horizontal and vertical bands into small compartments in which are represented in relief symbols associated with the cult of this Syrian god, and busts of Greek gods. On the cubical base is a relief representing Tyche, who is a Hellenized form of the Syrian goddess Atargatis. The bronze is to be dated in the second century. A large opening in the top of the wider base may have been intended for the insertion of tablets with questions addressed to the god.

BELGIUM

HOARDS OF COINS.—The *R. Belge Num.* LXXI, 1919, pp. 344-348, reports several finds: (1)

At **Meux**, in 1916, a Roman urn was dug up containing more than 800 Roman bronze coins of the first and second centuries A.D., from the reign of Augustus to that of Commodus—all already known. (2) At the Villa de Baucellenne at **Mettet** twenty-one coins of the Roman Empire (first to third centuries A.D.) were discovered. Some are undecipherable. One—a coin of Antoninus Pius—appears to be new. (3) In the forest of **Soignes**, in 1919, a small bronze coin of the Emperor Julian (355-363 A.D.) was found (see Cohen 2d ed. p. 82, for a description).

BRUSSELS.—The **Royal Society of Numismatics**.—In a prefatory notice in the *R. Belge Num.* LXX, 1914 (published in 1919) the president of the Royal Society of Numismatics describes the injuries and losses suffered by the collections and library of the society during the German occupation of Belgium.

GERMANY

BERLIN.—A Statuette of Athena.—In *Ber. Kunsts.* XLI, 1920, pp. 62–64 (2 figs.) B. SCHRÖDER describes a fragmentary marble statuette of Athena recently acquired by the Berlin Antiquarium, and said to have been found at Eskischehir (Fig. 3). The figure wears a chiton and an overgirt peplos, and carries spear and shield. It is a Roman copy from a type of the Phidian period.



FIGURE 3.—TORSO OF
ATHENA: BERLIN.

GREAT BRITAIN

CARNARVON.—A Gnostic Inscription.—In *Proc. Soc. Ant.* XXXI, 1919, pp. 127–131 (fig.) C. R. PEERS interprets a Greek inscription on a sheet of gold found near Carnarvon in North Wales. The object was a talisman, and the inscription consists of Gnostic formulae, ending with the petition, “Protect me Alphianus.”

HURSTPIERPOINT.—Two Neolithic Spoons.—In *Proc. Soc. Ant.* XXXI, 1919, pp. 108–117 (8 figs.) J. E. COUCHMAN describes two neolithic clay spoons found near Hurstpierpoint, Sussex, and gives an account of similar spoons found on various European sites. He also publishes some bronzes of the Bronze Age now in a private collection at Hurstpierpoint, including several loops and palstaves.

LONDON.—Coins of Sinope.—The recent acquisition by the British Museum of 34 drachms of Sinope, purporting to have been found together in the Crimea, yields assistance toward a closer classification of the coin issues of Sinope in the first part of the fourth century B.C. The coins are described in detail and figured by E. S. G. ROBINSON in *Num. Chron.* 1920, pp. 1–16 (pl.).

Greek Coins Acquired by the British Museum.—A special grant of £10,000 by the Government, and liberal gifts by individuals have enabled the British Museum to purchase many Greek coins from the collection of the late Sir Hermann Weber. With the omission (except by mere mention) of such of these as the former owner had already published, or as will be shortly included in the printed catalogues of the Museum, the new acquisitions are described in detail by G. F. HILL in *Num. Chron.* 1920, pp. 97–116 (2 pls.). For the Aphrodite tetradrachm of Telesiphron (cf. *Num. Chron.* 1892, pl. XVI, 15) £450 was paid.

A Palaeolithic Flint.—In *Proc. Soc. Ant.* XXXI, 1919, pp. 50–55 (2 figs.) R. A. SMITH publishes a flint point of palaeolithic type, belonging to a hand axe, and remarkable as being polished. It seems to have been found at Clapton

Park, London. Mr. Smith also describes a Cissbury celt found at Heacham, Norfolk.

OXFORD.—Balliol College Collection of Coins.—The 1500–1600 Greek and Roman coins (nearly 400 Roman) left to Balliol College by the late Master (Dr. Strachan-Davidson) are described briefly by S. W. GROSSE in *Num. Chron.* 1920, pp. 117–121 (fig.). Of the Roman coins 300 range over the imperial period down to Theodosius I, and represent nearly 100 members of imperial families. The Greek collection is especially rich in tetradrachms of Alexander the Great. These have been examined by Mr. Newell.

WHIPSNAD.—In *Proc. Soc. Ant.* XXXI, 1919, pp. 39–50 (11 figs.) R. A. SMITH reports on a series of flint implements from the palaeolithic “floor” at Whipnade, Bedfordshire. They belong to the period “when the ovate and pointed core-implements were going out of fashion and the flake-implements of the early Cave-period coming in.”

NORTHERN AFRICA

BULLA REGIA.—The *Thermae* and other Buildings.—In *C. R. Acad. Insc.* 1919, pp. 374–376 L. CARTON reports on the excavation of the imposing entrance to the *Thermae* of Bulla Regia. The Baths were approached by a fine paved way, from which three steps led to a wide platform. From the vestibule two flights of stairs descend to a long hall on the south side of the *frigidarium*. Architectural and sculptural fragments of the building have been found. The building at Bulla Regia which Tissot believed to be a Punic fortress has been further excavated. It has not the corner towers which Tissot imagined, but is of quadrilateral form, and rests on a base which supported a heavy cornice. M. Carton has also excavated at Bulla Regia the *presbyterium* of an early church and the apse of a funeral chapel, possibly a remodelling of an ancient temple.

CARTHAGE.—A Subterranean Building.—In *C. R. Acad. Insc.* 1919, pp. 372–374 L. CARTON gives a summary account of the excavation of a subterranean building of Carthage, intended, he thinks, as a storehouse for water-jars supplied to ships sailing from the port. Some 2000 amphorae were discovered on the site. The building had a façade of fine finished stones. Forty-nine lamps were discovered on the site; several inscriptions, fragments of Corinthian capitals, a Doric capital, fragments of statuary, glass mosaic, and painted stucco. The study of the port of ancient Carthage has been greatly facilitated by photographs made by the military aviation service in Tunis.

CYRENE.—Recent Excavations.—A brief summary of Italian discoveries in the Cyrenaica in 1920 is included in a report of recent Italian archaeological research by Thomas Ashby in the *Literary Supplement* of the *London Times*, December 16, 1920. The Tabularium, with inscriptions dedicated by the *νομοφύλακες* was discovered. The Temple of Zeus has been cleared. On the site of the Temple of Apollo excavation has revealed remains of the original temple of the fifth century B.C. Near by were shrines, in one of which was found a seated statue of Apollo Citharoedus. An “Iseum” contained other interesting sculptures, including a brightly colored statuette of an oriental

goddess, perhaps Atargatis. At Ptolemais was found a statue representing Africa.

DJEMILA.—*Inscriptions.*—In *R. Ét. Anc.* XXII, 1920, pp. 97–103, R. CAGNAT publishes six inscriptions in honor of C. Julius Crescens Didius Crescentianus, a provincial raised to the equestrian rank by Antoninus Pius, and honored as the founder of the Basilica Julia at Djemila (Cuicul). The inscriptions supplement *C. I. L.* VIII, 8313, 8318, and 8319, and permit the construction of a stemma of the family of Crescentianus.

OULED-ABDALLAH.—*A Table of Measures.*—In *C. R. Acad. Insc.* 1919, pp. 379–387 J. CARCOPINO discusses an altar found at Ouled-Abdallah near Saint-Arnaud, originally dedicated to the emperor Maximinus, but after his death converted into a table of measures of capacity, with a circular cutting for the *semodius* and a square one for the *urceus*. Since the cuttings were intended to receive metal linings, they do not in their present state show the exact capacity of the two measures; but the *semodius* seems to have been much larger than the official *semodius*, and the *urceus* about equal to the official *semodius*. These facts point to a local system of measures perpetuated under Roman names.

THUBURBO-MAJUS.—*An Inscription in honor of C. Vettius Sabinianus.*—In *C. R. Acad. Insc.* 1919, pp. 355–372, ALFRED MERLIN discusses in detail an important honorific inscription from Thuburbo-Majus in Tunis, dedicated to C. Vettius Sabinianus, who held many important civil and military offices under the Antonines. The inscription proves that several other inscriptions containing the name Vettius Sabinianus refer to the same person.

VOLUBILIS.—*Recent Excavations.*—In *C. R. Acad. Insc.* 1919, pp. 439–444, LOUIS CHATELAIN reports the discovery of the *cardo* and *decumani* of the town of Volubilis, with remains of houses and shops. The finest houses were on the *decumanus maximus*. Two inscriptions were discovered, both recording dedications by Aurelius Nectorega, a centurion in command of British auxiliaries stationed at this place. One is in honor of Mithra; the other is in honor of Commodus, and must be dated 191–192 A.D.

A Dedication to Probus.—In *C. R. Acad. Insc.* 1919, pp. 351–354, L. CHATELAIN publishes an inscription from an altar at Volubilis, dedicated to Probus in 277 A.D. by Clementius Valerius Marcellinus in commemoration of a peace which had been negotiated with the African tribe of the Baquates.

UNITED STATES

BOSTON.—*The History of the Museum of Fine Arts.*—The fiftieth anniversary of the Museum has occasioned the publication of a brochure by B. I. GILMAN, Secretary of the Museum, entitled *Museum of Fine Arts, Boston, 1870–1920* (40 pages; 25 figs.). The financial development of the Museum; some of its important accessions; its buildings, installation, and administration are described; and a chronology of some of the chief events in its history is added.

NEW YORK.—*Egyptian Sculptures.*—In *B. Metr. Mus.* XV, 1920, pp. 137–139 (5 figs.), are published a number of recently acquired Egyptian works,

including a splendid representation of King Senusert III as a sphinx, in diorite, a diorite group of King Sahure and a nome figure, a basalt statue of the chief priest Harbas holding a figure of Osiris, a sculptor's model of a ram's head, and a fine Fayum portrait.

NORTHAMPTON.—A Statue of a Satyr.—In the *Bulletin of the Hillyer Art Gallery*, Smith College, May, 1920, pp. 4–6, S. N. D(EANE) describes a Graeco-Roman statue of a young satyr, recently acquired for the Smith College collection (Fig. 4). It is a replica of a figure in the Glyptothek Ny Carlsberg (Reinach, *Répertoire de la statuaire*, IV, p. 74) and was possibly originally a fountain figure.

EARLY CHRISTIAN, BYZANTINE, MEDIAEVAL, AND RENAISSANCE ART

GENERAL AND MISCELLANEOUS

HOARDS OF COINS.—The *R. Belge Num.* LXXI, 1919, pp. 124 ff., reports (1) an important find of coins at Amsterdam, in 1915, of 807 pieces of silver and 33 of gold, including German, Dutch, Belgian coins of the fourteenth and fifteenth centuries; (2) at **Stora Sojdebg** (island of Gotland), Sweden, in 1910, 2308 coins together with some bits of silver from jewelry, of various dates (details not given) mostly mediæval, representing Holland, Germany, England, Denmark, Switzerland, Ireland, Bohemia, Italy, Hungary, Byzantine Empire, Belgium, and Arab countries. *Ibid.* LXXII, 1920, pp. 78 ff., reports several finds of coins: (1) at **Luxemburg**, 1916, during the building of a moving picture theatre, a pitcher containing over a thousand pieces much oxidized, apparently *deniers tournois noirs* of Louis IX or Louis X; (2) at **Transinne**, 1919, about 2000 French deniers of the eleventh century.

ITALY

ANCONA.—Public Art Gallery.—In *Cron. B. A.* VII, 1920, pp. 1–9 (8 figs.) L. SERRA publishes a catalogue of the rearranged Pinacoteca Civica of Ancona, which gives an idea of the richness of the collection, including such artists as Lotto, Titian, and Carlo Crivelli.

FLORENCE.—A Tondo by Signorelli.—A hitherto unknown painting of the Madonna with Sts. Jerome and Bernard, in the Castel di Poggio, Florence, is



FIGURE 4.—STATUETTE OF YOUTHFUL SATYR: NORTHAMPTON.

published by A. CHIAPPELLI in *Rass. d'Arte*, VII, 1920, pp. 73-76 (4 figs.). In subject matter, arrangement of composition, and size and quality of canvas and wooden backing the picture is precisely like one in the Corsini Gallery in Florence, which has been assigned to Signorelli. A study of these two pictures side by side proves the correctness of Venturi's conjecture that pupils had a share in the Corsini painting, for the new one clearly shows the first thoughts of the master, while the one in the Corsini is apparently a replica which Luca started to make and then left to pupils to finish.

A Drawing by Pontormo.—In *Boll. Arte*, XIV, 1920, p. 36 (3 figs.), O. H. GIGLIOLI publishes a hitherto unidentified drawing in the Uffizi. It is a study for two figures in Pontormo's painting of the Madonna and St. John in the Uffizi. On one side is a careful drawing of a nude youth, a study for the Virgin; the pose and expression are in almost every detail retained in the final picture. On the other side is a study for the Christ Child.

A Portrait of Baccio Valori.—In *L'Arte*, XXIII, 1920, pp. 134-135 (2 figs.), O. H. GIGLIOLI offers further proof for his previous identification of a portrait by Sebastiano del Piombo in the Pitti Gallery (See *Boll. Arte*, 1909). A detail of Battista Franco's representation of the battle of Montemurlo shows a portrait of Baccio Valori which is so closely similar to the Pitti portrait as to prove conclusively not only that the latter represents the same man but also that it served as the basis for the portrait in Battista Franco's painting.

GAGLIANO ATERNO.—*Castle and Church.*—In *Rass. d'Arte*, VII, 1920, pp. 70-72 (5 figs.), P. PICCIRILLI describes the principal monuments in this little town in the province of Aquila a short distance from Sulmona. The buildings are on a little hill, on the summit of which rises the vast castle, erected in 1328. It contains frescoes of the sixteenth century. The parochial church belongs partly to the fifteenth century, partly to the succeeding centuries; the lower part of the wall and the rather rudely carved portal belong to the early date, the upper part of the wall, with its beautiful rosette, to the seventeenth, and the vault to the eighteenth century. There are sixteenth century frescoes in the apse and later paintings and sculptures of interest in the church.

GENOA.—*Leonardo's St. Anne.*—In *Rass. d'Arte*, VII, 1920, pp. 197-199 (2 figs.), A. PETTORELLI publishes a hitherto unknown painting owned by a Genoese gentleman which is of interest in connection with Leonardo's cartoon of St. Anne, the Virgin, Christ Child, and St. John in London. The painting is by an unknown Lombard artist and has little artistic value in itself, but in the general composition it is closer to Leonardo's cartoon than is Luini's painting in the Ambrosiana.

LUCCA.—*Jacopo della Quercia.*—In *L'Arte*, XXIII, 1920, p. 160 (pl.), A. VENTURI publishes a sculptural representation of a sainted knight in the cathedral at Lucca, which he attributes to the earliest period of Jacopo della Quercia. There is more of Gothic Siennese heritage in this than in the artist's later work.

RAVENNA.—*New Portraits of Dante.*—Two frescoes brought to light in January, 1920, in the church of San Francesco at Ravenna have given rise to much discussion in various publications, not only because they are beautiful—if somewhat mutilated—examples of trecento Giottesque painting, but more especially because in each it seems possible to recognize a portrait of Dante. The more important of the two represents a seated figure in meditation (Fig. 5). While lacking the crown of laurels and other obvious accessories of a poet, the

features are not unlike those to be seen in other portraits believed to be of Dante; they are particularly similar to those of the later portrait on the poet's tomb. The location of the portrait, over a door that led from the church into the Franciscan convent, suggests the hypothesis that the original tomb of the poet was near this door; such a hypothesis seems to give a satisfactory interpretation of various literary references to the tomb. The second fresco is a fragment of a Crucifixion (Fig. 6); the suggestion that the prominent figure in profile who gazes longingly toward the now lost cross is likewise a portrait of Dante is more evasive of proof but nevertheless fascinating.



FIGURE 5.—PORTRAIT OF DANTE: FRESCO:
RAVENNA.

Insc. 1919, pp. 447-449) reports the discovery near the church of S. Sebastiano on the Via Appia of three Christian tombs of various dates, decorated with frescoes. The excavations have shown that this whole site is rich in antiquities.

The Menotti Donation.—From the gift of sixteenth and early seventeenth century furniture and paintings recently made to the state by Mario Menotti to fit up one of the rooms in the apartment of Paul III in the Castel S. Angelo, R. PAPINI publishes in *Rass. d'Arte*, VII, 1920, pp. 61-66 (6 figs.), the most important paintings. Most of them are by artists who were Venetian either by birth or by adoption. A Madonna and Child is a splendid example

Pomponio Allegri.—Two recently found paintings by the son of Correggio are published by C. RICCI in *Rass. d'Arte*, VII, 1920, pp. 12-14 (3 figs.). They do not give the artist a high rank but have some interesting and original features. The more important of the two paintings is a representation of Charity, now in the museum at Ravenna. Charity is not the usual classical half-draped type, holding two children, but a real woman dressed in contemporary costume, in the room of a real home. She stands with her back to us, her face in profile, and nude children (very badly drawn) play all about her. The other painting is a Madonna, now in the Brera. Its most interesting characteristic is the very modern treatment of the landscape.

ROME. — Three Christian Tombs.—F. CUMONT, in a note communicated to the Académie des Inscriptions (*C. R. Acad.*

of the work of Montagna; in its emphasis upon pure form, with subordination of color effects; it appears the progenitor of modern cubism. A St. Jerome is the work of the early years of Lotto. A Redeemer and St. Onofrio are by followers of Carlo Crivelli who were also influenced by engravings by Dürer and followers. A fine painting by Paris Bordone represents Christ with the Cross. Finally, a canvas representing the Education of Bacchus is attributed to Van Dyck.

SESSA AURUNCA.—Byzantine Coins.—In *Not. Scav.* XVI, 1919, pp. 356–358, ALDA LEVI reports the discovery of a hoard of Byzantine coins. With the exception of two gold pieces the coins are of bronze, and 2000 of the number cannot be deciphered. The rest date from about 526 to about 550 A.D., representing the reigns of Justinian I and the four Ostrogothic kings from Athalaric to Totila.

VENICE.—Veronese's Juno.—In *Rass. d'Arte*, VII, 1920, pp. 151–153 (fig.), the Editor notes the restitution to Italy of the Juno by Paolo Veronese, which has for many years been in the Brussels museum. The painting is to be replaced in the soffit of the room of the Consiglio dei Dieci in the Ducal Palace at Venice, for which it was painted.

VOLTERRA.—Painting in the Fourteenth Century.—In *L'Arte*, XXIII, 1920, p. 162, M. BATTISTINI publishes a notice from the archives of Volterra which shows that Francesco di Neri da Volterra was in Volterra in 1343. This makes plausible P. Consortini's hypothesis that the painting of the Badia di S. Giusto at Volterra may have been executed by this artist rather than by Giotto, as the tradition of Volterra would have it.



FIGURE 6.—FRAGMENT OF CRUCIFIXION:
FRESCO: RAVENNA.

SPAIN

MADRID.—A Triptych by Gerard David.—A splendidly preserved triptych with the subject of the Nativity in the central panel and the donor and wife and patron saints in the wings is published by A. L. MAYER in *Z. Bild. K.* XXI, 1920, p. 97 (pl.). The painting has been for centuries in a family of Navarre and has suffered but slight injuries and no restorations. Its owners

have thought it the work of Memling; but its style places it in the second period of David's activity, when he was strongly influenced by Hugo van der Goes. In fact, its closest parallel in other of David's pictures is found in the Munich Adoration of the Kings, which M. J. Friedländer considers a copy of a lost work by Goes. It seems quite evident that the new triptych was likewise inspired by a now lost picture by Goes.

FRANCE

METZ.—Miniatures Illustrating a Work of King René.—In *C. R. Acad. Insc.* 1920, pp. 3–9, the Comte PAUL DURRIEU reports his identification, in the Library of Metz, of five miniatures illustrating the allegorical work of King René of Anjou, entitled the *Mortifiement de vaine plaisance*. He traces them to a manuscript described in the *Bibliothèque lorraine* of Don Calmet (1751), who regarded it as the original manuscript.

BELGIUM

HOARDS OF COINS.—In *R. Belge. Num.* LXXI, 1919, pp. 121–124, the discovery of several hoards of coins is reported: (1) at Millen, in 1916, 171 deniers of Liège and Brabant of the twelfth and thirteenth centuries, a few not hitherto published; and (2) at Fouron-le-Comte (province of Liège), in 1918, 18 gold pieces and several hundred silver pieces—still others were stolen at the time of the discovery—representing money of Belgium, Holland, Spain, France, and England of the reigns of Albert and Isabel and Philip IV. *Ibid.* LXXI, 1919, pp. 125 ff., reports the discovery at Vielsalm à Saint-Vith in 1915, of two pots of silver coins, mostly German *Schrüsselheller*. These coins fell into the hands of the German authorities and a full description was not possible until 1920 (*ibid.* LXXII, pp. 79 ff.). There were over 7000 pieces of the sixteenth century, all silver except two, which were gold, and nearly all German although seventy-eight were coins of Brabant, Liège, etc. It seems probable that the carrier of this treasure had brought it from Germany and lost his life in the religious wars after he had concealed it. *Ibid.* LXXII, 1920, pp. 78 ff., reports several finds of coins: (1) at Majeron, a splendid aureus of Vespasian; (2) at Ville-My, a paper package of coins found (1919) in a hole in the wall of an old house, mostly of the Low Countries (seventeenth century) but including a few French coins, one of which—a half-crown of Louis XIV—is very rare; (3) at Baelen-Wetzel, in 1917, a pot of coins, some of which were shared by the two peasants who discovered them. About 92 have been examined. These are pieces of the sixteenth and seventeenth centuries of Holland and Belgium.

GERMANY

BERLIN.—Accessions to the Collections of Chinese and Japanese Art.—In *Ber. Kunsts.* XLI, 1920, pp. 65–72 (4 figs.) T. KLEE reports the acquisition for the Berlin museums of two early Chinese terra-cottas, a vase in the form of a ram, and a statuette of a boy; a marble seated Buddha, possibly to be attributed to the eighth century; and two Buddhist reliefs of gilded bronze from Japan, belonging to the Suiko period.

Central Rhine Tapestries.—Two fine tapestries of about 1500, attributed with certainty to the Central Rhine school, have been acquired by the Berlin

museums, and are published in *Ber. Kunsts.* XLI, 1919, pp. 22-52 (12 figs.) with full description and comment by H. SCHMITZ. One represents the story of Susanna; the other that of the Prodigal Son.

The Simon Collection.—An unusually rich collection of objects of art has been given to the Berlin museums by Dr. J. Simon, and some of its important pieces are described in *Ber. Kunsts.* XLI, 1920, pp. 184-230 (29 figs.): the German Renaissance sculpture by Dr. DEMMLER; the Gothic sculptures by Dr. VOLBACH; the paintings by M. J. FRIEDLÄNDER, including a Madonna of the style connected with the name Adriaen Isenbrant, copied from the Madonna of the Pala altar by Jan van Eyck; and the tapestries, including examples of German, Flemish, French and English work, by H. SCHMITZ.

The Solly Collection.—In *Ber. Kunsts.* XLI, 1920, pp. 6-22; C. BRINCKMANN gives a biographical sketch of Edward Solly, the English merchant whose Renaissance paintings formed the basis of the Prussian collection early in the last century. He publishes correspondence relating to the purchase of the collection, and gives a list of the most important paintings in it.

Three Renaissance Medals.—In the Simon collection, recently given to the Berlin museums, are three Renaissance medals which are the subject of an article by K. REGLING in *Ber. Kunsts.* XLI, 1920, pp. 90-96 (5 figs.). The first is a medal of Maximilian I and Charles V (ca. 1516-1519); the second is in honor of Jacob Anton Miller, Rector of St. Sophia (1556); the third in honor of the jurist Hieronymus Morcat.

DRESDEN.—**The Fiammingo.**—To the work already known of Frans Duquesnoy, the Fleming of his Italian contemporaries, E. TIETZE-CONRAT adds in *Z. Bild. K.* XXXI, 1920, pp. 152-156 (7 figs.), two bronze figures in the Dresden Albertinum. They are of practically the same size and the motives of the two, treatment of the drapery, etc., indicate very clearly that they are pendants. The subject of each is heroic suicide; Cato is the actor in one, Portia in the other. The figure of Portia is shown to be the work of Duquesnoy by its resemblance to his St. Susanna in S. Maria di Loreto, Rome. But the Cato bears no relationship to the classical character of the known work of the artist; it shows a new phase, a reminiscence of the artist's Flemish home, of the paintings of his friend Rubens. Cato is the type that Rubens created in his beardless Romans.

HAMBURG.—**Collection of Old Masters.**—Among the monuments in the Kunsthalle at Hamburg described by G. PAULI in *Z. Bild. K.* XXXI, 1919, pp. 21-36 (24 figs.), and 1920, pp. 183-194 (17 figs.), most attention is given to the altar of Peter, among the sculptures of which the work of a number of individuals can be distinguished. There are also in the collection important paintings by Funhof, B. Beham, the elder Cranach, Elsheimer, Burgkmair, van der Goes, etc.

WORMS.—**Gothic Clay Models.**—In *Z. Bild. K.* XXXI, 1920, pp. 123-126 (6 figs.), E. GRILL publishes some clay models now in the Paulus Museum at Worms that contribute toward the solution of problems connected with the making of clay models in the middle of the fifteenth century. Some of these were clearly made in Worms. The technique of the work indicates that the art was not dependent in style upon other arts, such as engraving, but was independent, a truly plastic art.

AUSTRIA

VIENNA.—Acquisitions of the *Kunsthistorisches Museum*.—Of the paintings recently added to the collection in the *Kunsthistorisches Museum*, Vienna, L. BALDASS describes the most important in *Z. Bild. K. XXXI*, 1920, pp. 115-122 (7 figs.). The earliest is a little half figure of the Madonna by Hans Holbein, the Elder, which must have been painted about 1499 and shows a clinging to fifteenth century Gothic style. A portrait by Willem van den Broeck, dated 1564 and evidently representing himself, shows the influence of Florentine painting. Jan Brueghel, the Elder, is represented by a characteristic street scene, while a painting by Solomon van Ruysdael representing duck hunters (dated 1633) shows a complete subordination of the genre element to the landscape. Likewise, in Jan Steen's *Nine-pin Players* the principal interest is in the interpretation of the landscape and atmospheric effect. The *Interior of a Peasant's Cottage*, dated 1647, belongs to the end of Adrien van Ostade's Rembrandt period. In a portrait of a woman by Gerard Terborch the influence of Velasquez is clearly visible. Finally there are two Venetian scenes by Antonio Canale.

DENMARK

COPENHAGEN.—Jean Fouquet.—In *Z. Bild. K. XXXI*, 1920, pp. 195-206 (9 figs.), F. WINKLER publishes five miniatures by Fouquet in the *Hours of the Cardinal Karl von Bourbon* in Copenhagen and analyzes the characteristics of the artist, whose greatness lay in his consistent perception of realism and in his sharpness of eye and sureness of hand.

RUSSIA

RIGA.—A Triptych by Jacob of Utrecht.—In *Z. Bild. K. XXXI*, 1920, pp. 74-76 (2 figs.), K. SCHAEFER publishes a beautiful triptych in the Riga museum signed by Jacob of Utrecht and dated 1520. The central subject is the Madonna enthroned; in the wings are the donors, the alderman H. Kerckring of Lübeck and his wife; and on the outside of the wings are two saints. The style is that of a tasteful, clever eclectic with closest likeness to Quentin Massys in his late work.

GREAT BRITAIN

GRASMERE.—Wood Carvings of the Sixteenth Century.—In *Proc. Soc. Ant. XXXI*, 1919, pp. 16-19 (6 figs.) H. S. COWPER describes several panels in a private collection in Grasmere, including a representation of Adam, Eve and the Serpent by an Italian artist of the first half of the sixteenth century, and five panels representing the story of the Prodigal Son, apparently German work of the sixteenth century.

LONDON.—Alabaster Tables.—In *Proc. Soc. Ant. XXXI*, 1919, pp. 57-61 (6 figs.) W. L. HILDBURGH discusses six alabaster tables found in Spain, but apparently of English origin, and to be dated in the fifteenth century. The reliefs represent (1) the Crucifixion; (2) the Trinity; (3) and (4) the Coronation of the Virgin; (5) the Adoration of the Magi; (6) the head of St. John.

An Armorial Slab from Budrun.—In *Proc. Soc. Ant. XXXI*, 1919, pp. 5-16 (5 figs.) G. F. HILL discusses an armorial slab inscribed with the name of Fray Francesco de Boxols, at one time captain of the castle of St. Peter at

Budrun. He compares it with other examples of Italian decorative sculpture of the fifteenth century.

A Portrait by Lotto.—To the long list of portraits by Lorenzo Lotto another is added in *Burl. Mag.* XXXVII, 1920, p. 39 (pl.). The picture, which is owned by Mr. Arthur Ruck, represents the half-length figure of an old man, and, though unsigned, bears all the characteristics of Lotto's style, of about 1540.

An Ivory Pyxis.—In *Mh. f. Kunstw.* XIII, 1920, pp. 98-107 (5 figs.) S. POGLAYEN-NEUWALL publishes an ivory pyxis in the Morgan collection of the South Kensington Museum with a representation of the miracle of the loaves and fishes: a combination of the blessing and the distribution of the bread. A very close parallel is offered by an ivory pyxis in the Livorno museum, so close that they must have had the same original provenance, which, apparently, is Egypt. The Morgan pyxis belongs to about 500 A.D.; the one at Livorno is somewhat earlier.

UNITED STATES

BOSTON.—Carel Fabritius.—In *Z. Bild. K.* XXI, 1920, pp. 72-73 (4 figs.), J. O. KRONIG publishes detailed photographs of an equestrian portrait in the Boston Museum of Fine Arts to prove that his attribution of it some years ago to C. Fabritius was correct and that the recent argument of G. GLÜCK (*ibid.*, April-May, 1919) is in error in attributing the work to the school of Van Dyck and in identifying the rider with Halmale in Peter Fluy's painting of that subject in the Antwerp museum.

A Painting by Fiorenzo di Lorenzo.—A tempera painting of the Madonna and Child, with St. Jerome, has been acquired by the Boston Museum of Fine Arts, and is described by C. H. H(AWES) in *B. Mus. F. A.* XVIII, 1920, pp. 26-27 (2 figs.).

A Sung Statue.—In *B. Mus. F. A.* XVIII, 1920, pp. 34-37 (3 figs.) J. E. L(ODGE) discusses a large wooden statue recently acquired by the Museum of Fine Arts. It is identified as a representation of Kwan-yin P'u-sa, and is attributed to a Chinese sculptor of the twelfth century.

NEW YORK.—**Madonna with Saints.**—In *B. Metr. Mus.* XV, 1920, pp. 137-139 (fig.), B. B. publishes the famous Madonna and Child with Saints by Girolamo dai Libri recently acquired by the Metropolitan Museum. The large painting was made originally for the church of San Leonardo near Verona and is especially interesting for its beautiful landscape. The Mantegna-like quality of the work suggests that it was done before 1526.

Near Eastern Objects.—In *B. Metr. Mus.* XV, 1920, pp. 197-202 J. B(RECK) describes recent accessions to the collections of Near Eastern Art in the Metropolitan Museum, including (1) a stone relief of the second century, from Afghanistan, representing the Bodhisattva Maitreya; (2) two stone figures of Buddha from the monastery of Nālandā in Maghadha, dating from the Pāla dynasty (ninth to twelfth century); (3) six examples of lustre pottery. In the same article the acquisition of European textiles of various periods is reported.

A Chinese Relief of the Han Period.—The Metropolitan Museum of Art has acquired a stone slab carved in relief, originally a part of a tomb of the Han period. According to the importers, it comes from Ching Ping Hsien in Shantung, which was the site of an imperial tomb. The design in low relief

shows a pavilion of two stories, with several human and animal figures. (*B. Metr. Mus.* XV, 1920, pp. 249-250; fig.).

ST. LOUIS.—**Chinese Paintings.**—In the *Bulletin* of the City Art Museum of St. Louis, V, 1920, pp. 26-32 (3 figs.) is a description of a group of Chinese paintings of the Sung period owned by the Museum, with illustrations of examples attributed to Kuo Hsi, Hui Tsung, and Li Tang.

WORCESTER.—**Spinello Aretino.**—Two panels attributed to Spinello Aretino which have recently been acquired by Mr. F. C. Smith, Jr., are published by R. WYER in *Art in America*, VIII, 1920, pp. 211-217 (2 figs.). Their closest parallel is found in Spinello's frescoes in the Palazzo Pubblico, Siena; so that they evidently belong to the artist's most distinctive period, 1408-1410, and they show the very best he did even then. They are predella panels with two scenes from the story of SSS. Cosmus and Damian.

AMERICAN ARCHAEOLOGY

GENERAL AND MISCELLANEOUS

NEW YORK.—**Recent Publications of the Heye Foundation.**—Activity on the part of the Museum of the American Indian (Heye Foundation) has resulted in 1920 in the completion of Volumes 6 and 10, *Indian Notes and Monographs*. In Volume 10, Number 3, pp. 40-106 (31 pls.; 10 figs.) is 'Notes on the Bribri of Costa Rica,' by A. B. SKINNER. In this ethnological account of the Bribri Indians (Chibcha stock) on the Teliri River, the author makes a remark of significance to Central American archaeologists: that the gold pendants in the form of eagles, alligators and frogs found so commonly in burial sites of the region, are still known and cherished by the natives as amulets. The stone seats so abundant in Central American archaeology have likewise descended to the present time in the form of wooden benches, generally in the form of turtles; the latter provide another link between the past and present Chibcha culture of the isthmus. Number 4 of the same volume by the same author describes 'An Image and An Amulet of Nephrite from Costa Rica,' pp. 111-113 (2 pls.). Number 1, Volume 10, pp. 5-20 (3 pls., 3 figs.) describes 'A Stone Effigy Pipe from Kentucky,' by GEORGE H. PEPPER. The same institution published some other papers in 1920. Chief among them are 'A Native Copper Celt from Ontario,' pp. 5-6 (pl.); 'Two Lenape Stone Masks from Pennsylvania and New Jersey,' pp. 5-7 (2 pls.); 'Two Antler Spoons from Ontario,' pp. 5-6 (pl.), all by A. B. SKINNER, and 'Sandals and Other Fabrics from Kentucky Caves,' pp. 5-20 (6 pls., 4 figs.), by W. C. ORCHARD.

PHILADELPHIA.—**A Collection of Inca and Aztec Gold.**—The Museum of the University of Pennsylvania has recently acquired two large collections of native American gold work. One, purchased in Paris in 1919, contains specimens from all the early gold-working peoples from Mexico to Peru; the other is a treasure excavated in 1920 in the mountains near Ayapel, Antiquoia, Colombia. This latter consists of three breastplates of thin beaten gold, 22 inches across, decorated in repoussé; five circular breastplates 10 to 13 inches in diameter; a girdle 3 feet long and 7 inches wide made up of 138 solid gold bars 4 inches long; eight fan-shaped nose-rings cast in solid gold; six staff heads; four bells (three of gold, one of copper) 2 inches high and an inch in diameter with

an opening at the side; sixteen solid gold nose or ear ornaments; nine strings of gold beads; eight plain gold bracelets; ten gold nose ornaments; twelve discs or bosses of plain gold; a funnel-shaped ornament 3 inches high and $2\frac{1}{2}$ inches in diameter; a gold armband 3 inches broad; a helmet of plain gold; six sheets of very thin gold about 16 by 20 inches. This is the most important treasure found in South America since the Conquest. The collection from Paris consists of two female images of pure gold, 9 inches high, cast hollow (Quimbaya); two gold discs, $7\frac{1}{2}$ inches in diameter, decorated with a face below which are sun's rays; four undecorated cuffs of heavy beaten gold, of which two are 9 inches high and two 7 inches; six gold crowns from 1 to 4 inches wide; two curious symbolic figures, $7\frac{1}{2}$ inches high and $4\frac{1}{2}$ inches wide, of gold cast $\frac{1}{8}$ inch thick (Chibcha); a bronze knife $5\frac{1}{2}$ inches long with a serpent on top of the blade and a solid gold stork standing on the handle; eighteen personal charms or amulets (Central America); five ear ornaments; fourteen nose ornaments; seven figures of men from 2 to 3 inches high, also two of silver cast solid; three models of throwing sticks and five pins from 4 to 6 inches long cast in solid gold; three ornaments 6 inches long covered with discs; a flat key-pad with eight hooks (Chibcha); two hollow bracelets $\frac{3}{4}$ inch in diameter; part of the mask of a human face with inlaid headband, eyes and teeth, a turquoise at each corner of the mouth representing four teeth (Mexico); fourteen hollow gold beads, six capped cylinders and six ovoid beads (Peru). There are the following examples of Inca work: a death mask 6 by $8\frac{1}{2}$ inches; three gold bells, one representing a dog-headed man sitting in a swing and holding a serpent in his mouth, another a grotesque animal sitting in a hoop of coiled wire, the third in the form of a very small owl; two gold images of men, one $1\frac{1}{4}$, the other $2\frac{1}{2}$ inches high; three pairs of gold tweezers, one 3 inches long, the others 1 inch long; a gold cuff 5 by 7 inches; a gold-headed pencil and three bronze pins; a female idol of silver 9 inches high cast hollow; five male idols of silver 3 inches high cast solid; also a silver deer, and a silver plate 3 by $3\frac{1}{2}$ inches. Of Central American gold there are: three conventionalized figures of men, one 3 inches high, the others 2 inches; three gold bells; seven gold frogs, five of them holding snakes' heads in their mouths; five gold birds 3 by $2\frac{1}{2}$ inches; eleven gold discs 4 to 6 inches in diameter. There are the following objects of Aztec gold: two filigree rings, one of them a remarkable piece of work showing a man in profile seated in a framework wearing an elaborate headdress and other decorations; ten small bells; two figures of men cast in solid gold; a turtle cast hollow; and an eagle's head cast hollow. The collection also contains the following pieces of Aztec jewelry: two necklaces of gold and highly polished green jade beads; a decorated jade bead 5 inches long by $1\frac{1}{2}$ inches wide; an ear ornament, two birds' heads and six carved heads with headdresses and an elaborately carved human figure, all of jade; six squatting jade figures, $1\frac{1}{2}$ to $3\frac{1}{2}$ inches high; a death's head, a cylindrical bead and a lip-plug of perfect crystal; and six jet lip-plugs. (W. C. FARABEE, *Mus. J.* XI, 1920, pp. 93-129; 22 figs.)

WASHINGTON.—Archaeology East of the Mississippi.—The Bureau of American Ethnology has recently published Bulletin 71, *Native Cemeteries and Forms of Burial East of the Mississippi*, pp. 1-160 (17 pls.), 1920. It is a report and description based upon historic sources giving, however, only general conclusions as to the distribution of the types of burial.

ABBREVIATIONS

Abh.: Abhandlungen. *Allg. Ztg.*: Münchener Allgemeine Zeitung. *Alt. Or.*: Der alte Orient. *Am. Anthr.*: American Anthropologist. *Am. Archit.*: American Architect. *A.J.A.*: American Journal of Archaeology. *A.J. Num.*: American Journal of Numismatics. *A.J. Sem. Lang.*: American Journal of Semitic Languages and Literature. *Ami d. Mon.*: Ami des Monuments. *Ant. Denk.*: Antike Denkmäler. *Ann. Arch. Anth.*: Annals of Archaeology and Anthropology. *Ann. Scuol. It. At.*: Annuario della r. Scuola Archeologica di Atene e delle Missioni Italiane in Oriente. *Arch. Anz.*: Archäologischer Anzeiger. *Ἀρχ. Δελτ.*: Ἀρχαιολογικὸν Δελτίον. *Ἀρχ. Ἐφ.*: Ἀρχαιολογικὴ Ἐφημερίς. *Arch. Rec.*: Architectural Record. *Arch. Rel.*: Archiv für Religionswissenschaft. *Arch. Miss.*: Archives de Missions Scientifiques et Littéraires. *Arch. Stor. Art.*: Archivio Storico dell' Arte. *Athen.*: Athenaeum (of London). *Ath. Mitt.*: Mitteilungen d. d. Archaeol. Instituts, Athen. *Abt.*

Beitr. Assyriol.: Beiträge zur Assyriologie. *Ber. Kunts.*: Amtliche Berichte aus den Preuss. Kunstsammlungen. *Berl. Akad.*: Preussische Akademie der Wissenschaften zu Berlin. *Berl. Phil. W.*: Berliner Philologische Wochenschrift. *Bibl. Stud.*: Biblische Studien. *Bibl. World.*: The Biblical World. *B. Ac. Hist.*: Boletín de la real Academia de la Historia. *B. Soc. Esp.*: Boletín de la Sociedad Española de Excursiones. *Boll. Arte.*: Bollettino d'Arte. *Boll. Num.*: Bollettino Italiano di Numismatica. *Bonn. Jb.*: Bonner Jahrbücher: Jahrbücher des Vereins von Altertumsfreunden im Rheinlande. *B.S.A.*: Annual of the British School at Athens. *B.S.R.*: Papers of the British School at Rome. *B. Arch. C. T.*: Bulletin Archéologique du Comité des Travaux hist. et scient. *B. Arch. M.*: Bulletin Archéol. du Ministère. *B.C.H.*: Bulletin de Correspondance Hellénique. *B. Cleve. Mus.*: Bulletin of the Cleveland Museum of Art. *B. Inst. Ég.*: Bulletin de l'Institut Égyptien (Cairo). *B. Metr. Mus.*: Bulletin of the Metropolitan Museum of Art, New York. *B. Mon.*: Bulletin Monumental. *B. Mus. Brux.*: Bulletin des Musées Royaux des arts décoratifs et industriels à Bruxelles. *B. Mus. F. A.*: Museum of Fine Arts Bulletin, Boston. *B. Num.*: Bulletin de Numismatique. *B. R. I. Des.*: Bulletin of the Rhode Island School of Design. *B. Soc. Anth.*: Bulletin de la Société d'Anthropologie de Paris. *B. Com. Rom.*: Bullettino d. Commissione Archeologica Comunale di Roma. *B. Arch. Crist.*: Bullettino di Archeologia Cristiana. *B. Pal. It.*: Bullettino di Paletnologia Italiana. *Burl. Mag.*: Burlington Magazine. *B. Soc. Ant. Fr.*: Bulletin de la Société des Antiquaires de France. *Byz. Z.*: Byzantinische Zeitschrift.

Chron. Arts.: Chronique des Arts. *Cl. Phil.*: Classical Philology. *Cl. R.*: Classical Review. *C. R. Acad. Insc.*: Comptes Rendus de l'Académie des Inscriptions et Belles-Lettres. *C.I.A.*: Corpus Inscriptionum Atticarum. *C.I.G.*: Corpus Inscriptionum Graecarum. *C.I.L.*: Corpus Inscriptionum Latinarum. *C.I.S.*: Corpus Inscriptionum Semiticarum. *Cron. B. A.*: Cronaca delle Belle Arti.

Eph. Ep.: Ephemeris Epigraphica. *Eph. Sem. Ep.*: Ephemeris für Semitische Epigraphik. *Exp. Times*: The Expository Times.

Gaz. B.-A.: Gazette des Beaux-Arts. *G.D.I.*: Sammlung der griechischen Dialekt-Inschriften.

I.G.: Inscriptiones Graecae (for contents and numbering of volumes, cf. *A.J.A.* IX, 1905, pp. 96–97). *I.G.A.*: Inscriptiones Graecae Antiquissimae, ed. Roehl. *I.G. Arg.*: Inscriptiones Graecae Argolidis. *I.G. Ins.*: Inscriptiones Graecarum Insularum. *I.G. Sept.*: Inscriptiones Graeciae Septentrionalis. *I.G. Sic. It.*: Inscriptiones Graecae Siciliae et Italiae.

Jb. Arch. I.: Jahrbuch d. d. Archäol. Instituts. *Jb. Kl. Alt.*: Neue Jahrbücher für das klassische Altertum, Geschichte und deutsche Litteratur und für Pädagogik. *Jb. Kunsth. Samm.*: Jahrbuch der Kunsthistorischen Sammlungen des allerhöchsten Kaiserhauses. *Jb. Phil. Päd.*: Neue Jahrbücher für Philologie und Pädagogik (Fleckeisen's Jahrbücher). *Jb. Preuss. Kunts.*: Jahrbuch d. Preuss. Kunstsammlungen. *Jh. Oest. Arch. I.*: Jahreshefte des oesterreichischen Archäologischen Instituts. *J. Asiat.*: Journal Asiatique. *J.A.O.S.*: Journal of the American Oriental Society. *J.B. Archaeol.*: Journal of the British Archaeological Association. *J. B. Archt.*: Journal of the Royal Institute of British Architects. *J. Bibl. Lit.*: Journal of Biblical Literature. *J. E. A.*: Journal of Egyptian Archaeology. *J. H. S.*

Journal of Hellenic Studies. *J. Int. Arch. Num.*: Διέθνῃς Ἐφημερίς τῆς νομισματικῆς ἀρχαιολογίας, Journal international d'archéologie numismatique (Athens). *J.R.S.*: Journal of Roman Studies.

Kb. Gesammtver.: Korrespondenzblatt des Gesamtvereins der deutschen Geschichts- und Altertumsvereine. *Kunstchr.*: Kunstchronik.

Mb. Num. Ges. Wien: Monatsblatt der Numismatischen Gesellschaft in Wien. *Mh. f. Kunstw.*: Monatshefte für Kunstwissenschaft. *Mél. Arch. Hist.*: Mélanges d'Archéologie et d'Histoire (of French School in Rome). *Mél. Fac. Or.*: Mélanges de la Faculté Orientale, Beirut. *M. Inst. Gen.*: Mémoires de l'Institut Genevois. *M. Soc. Ant. Fr.*: Mémoires de la Société des Antiquaires de France. *M. Acc. Modena*: Memorie della Regia Accademia di scienze, lettere ed arti in Modena. *Mitt. Anth. Ges.*: Mitteilungen der anthropologischen Gesellschaft in Wien. *Mitt. C.-Comm.*: Mitteilungen der Central-Commission für Erforschung und Erhaltung der Kunst- und historischen Denkmale. *Mitt. Or. Ges.*: Mitteilungen der deutschen Orient-Gesellschaft. *Mitt. Pal. V.*: Mitteilungen und Nachrichten des deutschen Palästina Vereins. *Mitt. Nassau*: Mitteilungen des Vereins für nassauische Altertumskunde und Geschichtsforschung. *Mitt. Vorderas. Ges.*: Mitteilungen der vorderasiatischen Gesellschaft. *Mon. Ant.*: Monumenti Antichi (of Accad. d. Lincei). *Mon. Piot*: Monuments et Mémoires publ. par l'Acad. des Inscriptions, etc. (Fondation Piot.) *Mün. Akad.*: Bayerische Akademie der Wissenschaften, München. *Mün. Jb. Bild. K.*: Münchner Jahrbuch der bildenden Kunst. *Mus. J.*: The Museum Journal of the University of Pennsylvania.

N. D. Alt.: Nachrichten über deutsche Altertumskunde. *Not. Scav.*: Notizie degli Scavi di Antichità. *Num. Chron.*: Numismatic Chronicle. *Num. Z.*: Numismatische Zeitschrift. *N. Arch. Ven.*: Nuovo Archivio Veneto. *N. Bull. Arch. Crist.*: Nuovo Bullettino di Archeologia cristiana.

Or. Lit.: Orientalistische Literaturzeitung. *Or. Lux*: Ex Oriente Lux.

Pal. Ex. Fund: Quarterly Statement of the Palestine Exploration Fund. Πρακτικά: Πρακτικά τῆς ἐν Ἀθῆναις ἀρχαιολογικῆς ἐταιρείας. *Proc. Soc. Ant.*: Proceedings of the Society of Antiquaries.

Rass. d'Arte: Rassegna d'Arte. *R. Tr. Eg. Assyr.*: Recueil de travaux relatifs à la philologie et à l'archéologie égyptiennes et assyriennes. *Rend. Acc. Lincei*: Rendiconti d. r. Accademia dei Lincei. *Rep. f. K.*: Repertorium für Kunstwissenschaft. *R. Assoc. Barc.*: Revista de la Asociacion artistico-arqueologica Barcelonesa. *R. Arch. Bibl. Mus.*: Revista di Archivos Bibliotecas, y Museos. *R. Arch.*: Revue Archéologique. *R. Art Anc. Mod.*: Revue de l'Art ancien et moderne. *R. Art Chrét.*: Revue de l'Art Chrétien. *R. Belge Num.*: Revue Belge de Numismatique. *R. Bibl.*: Revue Biblique Internationale. *R. Ép.*: Revue Épigraphique. *R. Ét. Anc.*: Revue des Études Anciennes. *R. Ét. Gr.*: Revue des Études Grecques. *R. Ét. J.*: Revue des Études Juives. *R. Hist. Rel.*: Revue de l'Histoire des Religions. *R. Num.*: Revue Numismatique. *R. Or. Lat.*: Revue de l'Orient Latin. *R. Sém.*: Revue Sémitique. *R. Suisse Num.*: Revue Suisse de Numismatique. *Rh. Mus.*: Rheinisches Museum für Philologie, Neue Folge. *R. Abruzz.*: Rivista Abruzzesa di Scienze, Lettere ed Arte. *R. Ital. Num.*: Rivista Italiana Numismatica. *R. Stor. Ant.*: Rivista di Storia Antica. *R. Stor. Calabr.*: Rivista Storica Calabrese. *R. Stor. Ital.*: Rivista Storica Italiana. *Röm.-Germ. Forsch.*: Bericht über die Fortschritte der Römisch-Germanischen Forschung. *Röm.-Germ. Kb.*: Römisch-Germanisches Korrespondenzblatt. *Röm. Mitt.*: Mitteilungen d. d. Archäol. Instituts Röm. Abt. *Röm. Quart.*: Römische Quartalschrift für christliche Altertumskunde und für Kirchengeschichte.

Sächs. Ges.: Sächsische Gesellschaft (Leipsic). *Sitzb.*: Sitzungsberichte. *S. Bibl. Arch.*: Society of Biblical Archaeology, Proceedings.

W. kl. Phil.: Wochenschrift für klassische Philologie.

Z. D. Pal. V.: Zeitschrift des Deutschen Palästina Vereins. *Z. Aeg. Sp. Alt.*: Zeitschrift für Aegyptische Sprache und Altertumskunde. *Z. Alttest. Wiss.*: Zeitschrift für alttestamentliche Wissenschaft. *Z. Assyr.*: Zeitschrift für Assyriologie. *Z. Bild. K.*: Zeitschrift für Bildende Kunst. *Z. Ethn.*: Zeitschrift für Ethnologie. *Z. Morgenl.*: Wiener Zeitschrift für die Kunde des Morgenlands. *Z. Morgenl. Ges.*: Zeitschrift der deutschen Morgenländischen Gesellschaft. *Z. Mün. Alt.*: Zeitschrift des Münchener Alterthumsvereins. *Z. Num.*: Zeitschrift für Numismatik.



CYRENAIC CYLIX FROM SARDIS: NEW YORK.

TWO VASES FROM SARDIS

[PLATE IV]

THE two vases which are represented on PLATE IV and Figure 2 are now in the Metropolitan Museum of Art, New York. They were found in fragments in a tomb at Sardis which was one of the richest in pottery that has yet been discovered there. Each vase has its special points of interest, and each, as I shall try to show, throws some light on the broader problems raised by the mass of vases and fragments recovered by the American Society for the Exploration of Sardis.

I shall begin with the vase (PLATE IV) which presents the simpler problem, so far as classification is concerned—a well preserved cylix of the class commonly called Cyrenaic.¹ It is in all respects a typical example. The shape is the common one for the Cyrenaic drinking cup, with deep bowl and comparatively short stem. With the exception of the foot and a band on a level with the handles, it is covered with the characteristic white slip, over which the decoration is painted in black varnish of fairly good quality, with considerable use of purplish red as an overcolor. The scheme of the decoration, also, is a familiar one, with groups of fine and broad bands (the broad ones regularly with red overcolor) used to separate the more elaborate patterns, thin downward rays on the stem, two pomegranate patterns, a row of eggs, and a band of upward rays on the body of the bowl, an elaborate pomegranate net on the lip, and two large palmettes (incised and with red centres) placed on their sides about each handle. On the inside of the lip is an elaborate lotus and pomegranate pattern, and at the centre of the bowl is the usual medallion, surrounded by broad and narrow bands and a Z-pattern. In the medallion is painted a Sphinx, seated to right, with recurved wings and with a scroll rising from her head. Between her legs is a bird facing right, and in front of her is another bird facing

¹ The dimensions are: height, 12.3 cm.; diameter, 18.9 cm.

left. Red overcolor is used on the hair and the backs of the wings of the Sphinx, and on the wings of the birds.

All these details can be closely paralleled in other examples of the Cyrenaic class.¹ The most unusual is the pattern on the inside of the lip, which is somewhat more elaborate than is common, but is plainly developed from the lotus bud and the pomegranate. The Sphinx is a frequent element in the decoration of this class of vases, especially for the central medallion of a cylix.² The closest parallel that I have found is in the cylix Louvre E 664 (= Dugas 34), of which the central medallion is here reproduced (Fig. 1) from *Arch. Zeit.* 1881, pl. XIII, No. 6.



FIGURE 1.—SPHINX FROM CYRENAIC CYLIX IN THE LOUVRE.

It is not my purpose here to enter into a detailed discussion of the controversy concerning the place of manufacture of the Cyrenaic group of vases. The theory that they were made at Cyrene, first suggested by Loeschke and Puchstein, was very generally accepted up to the time of the excavations of the British School on the site of the temple of Artemis Orthia at Sparta in 1906 and the following years.³ Those excava-

tions yielded many vases and fragments similar in technique and style to the Cyrenaic group already recognized, and—what is more important—the stratification of the site made it possible to distinguish earlier and later stages in the development of the ware.⁴ The

¹ For the decorative patterns on Cyrenaic vases, cf. *R. Arch.* IX, 1907, pp. 378–386.

² Compare in the useful catalogue of Cyrenaic vases compiled by Dugas (*R. Arch.* X, 1907, pp. 48–58), Nos. 24, 34, 39, 53, 59?, 85. All of these are cylices except No. 24. Cf. also *B.S.A.* XIII, p. 134, fig. 10 c (fragment from Sparta) and XIV, p. 38, fig. 5 (oenochoe from Sparta).

³ For the older literature on Cyrenaic vases, cf. *B.C.H.* XVII, 1893, p. 226, note 1; *R. Arch.* IX, 1907, p. 377, note 3. For more recent discussions, besides those already mentioned in the previous notes, reference may be made to Prinz, *Funde aus Naukratis*, pp. 64–67; *J.H.S.* XXVIII, 1908, pp. 175–179; *R. Arch.* XXI, 1913, pp. 418 f.

⁴ On the pottery found at Sparta, cf. Droop's reports in *B.S.A.* XIII, pp. 118–136; XIV, pp. 30–47; XV, pp. 23–39.

amount of this pottery is so great that it is obviously of local origin, and the excavators proposed the name "Laconian" for the whole class, and worked out a system of classification into six chronological groups (Laconian I, II, III, etc.),¹ which is entirely acceptable so far as the vases from Sparta are concerned. In regard to the "exported" vases, however, that is, vases found outside of Laconia, many, apparently, find an exclusive Laconian theory too narrow and feel that the arguments advanced for Cyrenaic origin for a part, at least, of the vases still have weight. These arguments are, in general, the amount of Cyrenaic ware found at Naukratis, for which Cyrene seems a more likely place of origin than Sparta; the subject and the details of the Arcesilas cylix,² which suggest an intimate knowledge of life at Cyrene hard to attribute to a Laconian painter; and the subject of a cylix in the British Museum which has been plausibly identified by Studniczka as the nymph Cyrene.³ To these may now be added the subject of a fragmentary cylix in the Museum of Tarentum, which seems to represent the nymph Cyrene struggling with the lion.⁴ The fragments of Cyrenaic vases discovered at Cyrene itself during the excavations conducted by the Archaeological Institute in 1910-11⁵ might also be cited in this connection, but these were so few that little weight can be given to their evidence. More extensive exploration of the site no doubt will some day bring more conclusive evidence. For the present we must, I think, conclude that Cyrenaic ware was certainly manufactured in Laconia, and probably also in Cyrene.

So far as the cylix from Sardis is concerned, the controversy as to the origin of the Cyrenaic vases is of secondary importance. In any case the vase before us is an imported vase of Greek manu-

¹ Cf. for a brief statement of the classification, *B.S.A.* XIV, pp. 46 f.; and for an attempt to apply it to the "exported" vases, *J.H.S.* XXX, 1910, pp. 1-34.

² In the Bibliothèque Nationale, Paris; cf. De Ridder, *Cat. des Vases Peints de la Bibl. Nat.* I, p. 98, No. 189. In Dugas's catalogue, No. 12.

³ British Museum B 4; cf. Walters, *Cat. of Greek and Roman Vases*, II, p. 50; Studniczka, *Kyrene*, pp. 17 ff. In Dugas's catalogue, No. 23.

⁴ Cf. Dugas, *R. Arch.* XX, 1912, pp. 96-98. In this article, which is devoted especially to a description of Cyrenaic vases in the Museum at Tarentum, Dugas has summarized very clearly (pp. 98-102) the arguments pro and con in the Laconia-Cyrene controversy. To his conclusion, that the answer to the question, "Cyrene or Sparta?" is really "Cyrene and Sparta," I heartily subscribe.

⁵ Cf. Hoppin in *Bull. Arch. Inst.* II, p. 165.

facture, which points to trade relations with the west, presumably through the medium of one of the Ionic cities. A more important question is the date to be assigned, inside the group, to this particular example. The elements to be considered in such an attempt at dating have been pointed out by Droop.¹ The most important are the amount and the quality of the white slip, which in early examples covers the whole vase and is thick and smooth, but later degenerates in quality and is gradually abandoned; the use of purple for parts of the decorative patterns, such as the crossbar of the lotus; the shape of the foot of the cylix, which at first has a sharp edge and later becomes thick and rounded; and the thickness of the rim, where "a greater thickness than .004 m. is likely, other things being equal, to indicate a date not earlier than the middle of Laconian IV" (550-500 B.C.). On the basis of these criteria, the cylix from Sardis must be placed in Laconian III (600-550) or Laconian IV (550-500), and on the whole the earlier period seems to me the more probable. The slip is of good quality and covers almost the whole vase; the foot has a notably sharp edge; and the thickness of the rim is not quite .003 m. Purple, to be sure, is not used for any part of the decorative patterns, but it is quite extensively used for the broad bands.

The dating 600-550 B.C. agrees well with the evidence of two other imported vases from the same tomb. One is an Attic vase of very early black-figured style, the other a Corinthian *olpe* of rather careless execution. The three vases together serve to date the comparatively large amount of native pottery found in the tomb and so give us a fixed point in the chronology of Sardian vases.

The problem presented by the second vase (Fig. 2) is of a different sort. This is a pitcher of unusual shape, characterized by a broad, wide spout with a strainer at the base, formed by perforating the wall of the vase at this point with a series of comparatively large holes, irregularly distributed. The vase has a foot in the shape of a truncated cone, a broad, thick handle placed on one side, and a rather low, offset rim.² The outside is decorated in the technique which is conveniently called "marbling," *i.e.*, the application, over a white slip, of black to brown varnish in a manner which produces irregular waves or zigzags,

¹ *J.H.S.* XXX, 1910, pp. 2-5.

² The dimensions are: height, 13 cm.; height with handle, 16.3 cm.; diameter, 11.9 cm.; length of spout, 6.8 cm.

suggesting an imitation of work in glass. The inside is painted in what may be called "streaked technique," the application of a lustrous varnish in such a way that, although the surface is covered, the effect is streaked and uneven.

That this vase is a local product there can be little doubt. The high, conical foot is a favorite with the potters of Sardis,¹



FIGURE 2.—VASE FROM SARDIS: NEW YORK.

and marbling and the streaked technique are characteristic of large numbers of Sardian vases of the seventh and the sixth centuries, B.C.² But the shape is unusual, and a search for similar forms leads to interesting results. The fundamental idea of a spouted vase with a strainer is, of course, no novelty in the sixth century, for it can be traced back to early post-Mycenaean times at least. I have noted an unpainted specimen from Tiryns³ and

¹ Cf. *A.J.A.* XVIII, 1914, p. 433.

² *Ibid.* pp. 434 f.

³ Schliemann, *Tiryns*, p. 120, fig. 30.

a number of examples from Cyprus.¹ But none of these vases presents close similarities to the vase from Sardis. All are characterized by narrow necks, small mouths, and much narrower bodies than our vase. In fact, the closest analogies that I have so far been able to find are in a series of spouted vases discovered in 1900 by the brothers Körte at Gordium. In the tumulus numbered III by the excavators, which is dated about 700 B.C., no less than fifteen such vases were found.² They show slight



FIGURE 3.—VASE FROM GORDIUM.

variations in form; eight are painted in dull colors with geometric patterns; seven are unpainted; and two have a perforated top instead of an open mouth. But all exhibit the long spout with the sieve at its base (cf. Fig. 3, from *Gordion*, pl. III). The

¹ Cf. British Museum C 703, *Catalogue of Greek and Roman Vases* I, pt. II, p. 133, fig. 262, and *Excavations in Cyprus*, p. 75, fig. 134 (sub-Mycenaean); Myres and Ohnefalsch-Richter, *Cat. of the Cyprus Museum*, p. 69, No. 1092, and pl. IV. (Graeco-Phoenician white ware); Louvre A 97, Pottier, *Vases Ant. du Louvre*, I, p. 6, pl. 7; Dümmler, *Ath. Mitt.* XIII, 1888, p. 290, fig. 1.

² Cf. G. and A. Körte, *Gordion: Ergebnisse der Ausgrabungen im Jahre 1900*, pp. 55-59, 62-64, 83 f.

discoverers argue that these vessels were made for dipping from a larger vase and serving some liquid containing solid ingredients, and they suggest, very plausibly, that this was barley-beer, such as Xenophon found in use among the Armenians.¹ There can be no doubt that these vases from Gordium are the work of native Phrygian potters. The decoration is similar to that of other vases found on the site, and the shape appears to have developed from earlier Phrygian spouted vases, examples of which (one with a sieve) were found in the much earlier tumulus of Bos-öjök.²

The shape of the vase from Sardis, therefore, points definitely towards the east and suggests that in the pottery from this site we must expect to find influences from the east as well as from the west. Such influences are difficult to prove, because the development of the potter's art in central Asia Minor is still obscure, and so clear a case as that of the spouted vase is very helpful.

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¹ Xen. *Anab.* IV, 5, 26 f.

² Cf. *Ath. Mitt.* XXIV, 1899, p. 33, with pl. III, Nos. 16 and 25.

ATTIC BUILDING ACCOUNTS

IV. THE STATUE OF ATHENA PROMACHOS¹

THE earliest of the extant building accounts from the Acropolis at Athens is that known as *I. G. I*, 284–288, formerly supposed to be the record of the Parthenon, or possibly of the Odeum.² This now appears on three fragments of marble, herein designated as A (*I. G. I*, 284–285), B (286–287), and C (288); though at first published separately, they were soon identified by Kirchhoff as belonging to a single construction. While this unity of subject is now generally accepted, it has not been so certain that all belong to a single stele,³ nor is their order indisputable. Kirchhoff placed C last, because of a blank space of 0.15 m. at the bottom;⁴ but there would still remain two possible orders, ABC or BAC.

The necessity for a restudy of this inscription becomes more pronounced when we observe that there exist at least three other fragments which may be assigned to it, on the basis of uniformity in shape and size of letters and spacing of lines, and the characteristic horizontal strokes separating the sums of money. These may be known as D (*I. G. I*, 545),⁵ E (545 a), and F (unpublished).⁶

¹ Three earlier articles of this series were published in this JOURNAL, Vol. XVII, 1913, pp. 53–80, 242–265, 371–398, pls. II–IV. In the fifth and concluding article I shall present some important modifications of the results which I obtained eight years ago.

² Kirchhoff, *Memorie dell' Inst.* 1865, pp. 129–142; Michaelis, *Parthenon*, pp. 287–288; Kirchhoff in the *Corpus* withdrew the attribution to the Parthenon.

³ Kirchhoff evidently assumed that they belonged to a single stone; Larfeld (*Handbuch d. att. Inschriften*, p. 45) suggests that perhaps they are from different blocks; Cavaignac (*Études sur l'Histoire Financière d'Athènes*, p. xlviii) says that "these fragments certainly belong to two different stones."

⁴ The original bottom of the stele is not preserved.

⁵ I now learn that Bannier (*Berl. Phil. W.* 1916, p. 160) has erroneously assigned *I. G. I*, 545 to the much later *I. G. I*, 319, referring to the Theseum (*R. Ét. Gr.* 1916, p. 439).

⁶ Inv. 1335 of the Acropolis; 0.075 m. high, 0.075 m. wide, and 0.045 m. thick, with the left edge preserved, elsewhere broken; now in the Epigraphical Museum, where it was once cemented to E.

The reason for which some have assumed that A, B, and C belong to different stelae is the existence of a peculiar fracture appearing on the bottom of A and the top of B, where they were split along a mica vein running almost horizontally across the stele, sloping down toward the left at a rate of 0.0025 m. in 0.11 m., and up toward the back at a rate of 0.01 m. in 0.11 m. The split surface is so clean that at first glance it was taken for a worked joint;¹ and the pieces were thought to be separate blocks. But since the same fracture appears on both A and B, proving that these two fragments belong to a single stone, there remains no ground for assigning the fragments to more than one stele.

Fragment A preserves the right edge of the stele,² though perhaps not the right edge of the inscription, for an anathyrosis, 0.06 m. wide, seems to indicate that it was adjoined by another stele, like the Erechtheum accounts of 409/408 B.C. It now contains twelve lines (numbered 1-12), of which three are blank (ll. 4, 7, 11). Fragment B, broken on all sides, cannot be placed directly under A, in spite of the similarity of the split surface, because it would be physically impossible to space the lines evenly across the fracture, or to align the left edges of the lines. Moving B to the left, following the given slope of the horizontal fracture, a width of about 0.57 m. would be required to give a drop of one line (0.0135 m.); it is evident that we are concerned with two separate item columns, and that the topmost extant line of B must be numbered 14, counting from the top of A. Fragment B in turn contains nineteen lines (ll. 14-32), of which five are blank in the portion preserved (ll. 16, 21, 23, 29, 30).

Michaelis had suggested that the T in the last line of B might be combined with the T in the first line of C to form the word ἐπιστ[α]τ[αι]; this suggestion is now confirmed by the fact that the fractures join accurately in such a way that B contains the second, and C the first T, of [ἐπιστ[α]τ[αι]. Fragment C therefore continues B, and its twenty-two extant lines may be numbered 32-53, of which four are blank (ll. 38, 40, 46, 48). Below the last line appears, as we noted, a blank space of 0.15 m., extending to the present broken bottom. The total height of the three com-

¹ Kirchhoff stated that the bottom of A seemed to be cut; he expressed a similar doubt with regard to the top of B (*Corpus*).

² Kirchhoff (*Memorie*, p. 130) and Michaelis (*Parthenon*, p. 287) state that it is broken on all sides; Kirchhoff (*Corpus*) later implied, and Bannier (*Rhein. Mus.* 1906, p. 218) stated, that the right edge was preserved.

bined fragments is 0.86 m. Though the order of the three fragments from top to bottom is ABC, yet, on account of the arrangement in two columns, we must read them in the order BCA.

Turning to the three new fragments, we observe that D likewise forms the end of a column, with 0.185 m. of blank space below the last line, a fact which associates it with C. Furthermore, in lines 43 and 51 of C (the third and eleventh above the bottom), the restoration proposed below leaves two or three empty letter spaces at the beginning; this circumstance is explained by D, where in the third and eleventh lines above the bottom the sums of money are so long that they overlap the space assigned to the item column. And the single letters remaining in the various lines of D may be satisfactorily restored to fit the items of C, though the two fragments are actually separated by a gap of 0.10 m. Fragment D, therefore, contains parts of lines 43-53 of the inscription. Now the left edge of D extends 0.035 m. to the left of the money column and is there broken off; but E and F show a finished left edge only 0.006 m. to the left of the money column. We are, therefore, to assume that the stele contained three double columns, and that B+C+D formed the central column, while E and F come either from the first column of the stele or from the first column of a second stele which adjoined the anathyrosis on A. It seems better to assign E and F to the first column of this stele, since as yet we have no evidence that the stone at the right of A was part of the same inscription. The two pieces contain no evidence as to their position in the column, but they fit together, F above E.¹ It is impossible to number the lines with relation to the four larger fragments.

The customary subdivision of the columns into separate money and item columns obtains also in the present example, and forms the basis for the estimate of the total width of the stele. The width of the last item column (on A), restoring the missing letters, was 0.285 m. (measured from the right edge of the stele); the money column on D is 0.08 m. wide; we may assume that the width of any double column was about 0.365 m. Three double columns give a total width of about 1.10 m. The thickness of the stone, as given by B, is 0.253 m. The height, as determined from the number of lines required for the restoration, was greater than 1.15 m.

The relation of the sums to the entries requires special notice.

¹ Though I found them separate, they had formerly been cemented together.

In fragment A the money column must have been placed at the left of the item column, since the latter is at the right edge of the stele. In B we seem at first glance to have the opposite arrangement, with the sums at the right of the entries.¹ But closer examination reveals the fact that the items and the sums of money do not correspond. In lines 19-20 the total of wages for this year would be but slightly more than 150 drachmae; and in lines 25-27 appears a single large sum which is opposite both the entry ἐς ποικιλίαν and the total expenditure for the year. These sums cannot belong to the items on B, and must, therefore, be connected with other items, now lost, at the right, in direct continuation of A; the sums for the items mentioned on B were actually at the left. This is now proved by the junction of D to C, and by the fact that on E+F the sums of money begin at the left edge of the stele.

The accounts are arranged year by year, dated by means of the annual *epistatae* and their secretary, while at the end of each account appears the running number of the year since the beginning of the work. Since a complete year (on B+C+D) occupied only twenty-three lines, with a spacing of 0.0135 m., and since the total number of lines was considerably greater than fifty-three, we must assume that there were at least three and possibly four years in each column. The only numeral now preserved is [δγδ]οον in Column III, line 6.² The space below this (corresponding to forty-seven lines of Column II) would be exactly filled by the accounts of two years, if the work lasted so long; only the beginning of the ninth account is preserved (ll. 8-12). Above fragment A, in Column III, must have appeared also the seventh account, since in the last line of Column II there are only six letter spaces for the numeral, requiring [ἑκτ]ον.³ Each of Columns I and II, therefore, contained the accounts of three years.

The relative order of these six fragments is now fixed. We should read the text, with restorations, as follows.

¹ Kirchhoff (*Memorie*, pp. 137-140) calculated the amounts of the expenses on this principle; Michaelis (*Parthenon*, p. 287) compared this peculiarity with the quota lists of 454/3; cf. Bannier, *Rhein. Mus.* 1906, pp. 218-219; with this I formerly agreed (*A. J. A.* 1913, p. 59 n. 1), before I had made a study of the fragment.

² See the commentary on this line.

³ See the commentary on this line.

Column I, fragments F + E (11 lines):

Δ Γ Η

 Π Μ Μ Χ
 Δ Δ Δ Η Ι Ι Ι Ι
 5
Π Χ Π Π Δ Δ
Π Η Η Η Ι Ι
Η Π Δ Δ Δ Δ Γ Η Η . .
 Μ Μ Μ Χ Χ Χ Χ
 10 Π Η Η Η Π Η Η
 Π Χ Η Η Η Π . .

Column II, ll. 14-53, fragments B + C + D:

15 [? Ἀνελόσαμεν τῷ ἔργ]οι
 [. ἐς οἶκο]δομίαν
 [κα . . .
 [ἄνθρακες καὶ χσύλα κ]αύσιμα

 20 [μισθοὶ καθεμέραν μισ]θοὶ κατα
 [μένα ἀ]πόπαχος

 25 [μισθοὶ ἐπιστάτεσι κ]αὶ γρα[μμ]
 [ατῇ ἐν τούτοι ἔτει]
 [ἀργύριον ἄσεμον ἐς] ποικιλί
 [αν τῷ
 [κεφάλαιον ἀναλόματ]ος

 30 [περιεγένετο τῷ λέμμ]ατος
 [κατὰ τὸ πέμπτον ἔτος]

 35 [Ἐπὶ τῆς ἀρχῆς ἡῖ : ἐγραμμ]άτευ[ε]
 [. : ἐπισ]τ[ά]τ[αι]
 [λέμματα παρὰ κολα]κρετ[ὸν]
 [λέμμα περιγενό]μενο[ν
 [ἐκ τῷ προτέρο ἐν]ιαυτῷ
 [.]ρα
 [. [Δ Τ Τ Τ Τ ε[. .

 [. τάλ]αντα: Π Τ Τ

40

[? Ἀνελόσαμε]ν τῶι ἔργο[ι]

[. ἐς οἰκ]οδομίαν κα[. . .

. . . ΔΔΔΓΙ

[ἀνθρακες κ]αὶ χσύλα κα[ύσιμα]

. . . ΠΗΗ

μ[ισθοὶ καθεμέ]ραν μισθοὶ κ[αταμένα]

45

τα[.] ἀπόπαχς

. . ΔΓΙ

μ[όλυβδος ?]

. ΗΗΠΔΔΔ

ἀ[ργύριον ἄσεμ]ον ἐς ποι[κιλίαν]

. ΗΙΙ

τῶ[.

ΧΠΗΗΗΗ

μ[ισθοὶ ἐπιστ]άτεσι κα[ὶ γραμμα]

50

ΠΔΗΗΗ

τ[εῖ ἐν τούτοι] ἔτει

ΜΧΧΗΗΔΓΙ

[κεφάλαιον] ἀναλόματ[ος]

ΠΗΗΠΔΔΔ

π[εριογένητ]ο τῶ λέμματ[ος]

. . Ι

κ[ατὰ τὸ ἑκτ]ον ἔτος

Column III, ll. 1-28, fragments A+B:

[μισθοὶ ἐπιστάτ]εσι καὶ γρ[α]

[μματῇ ἐν τούτ]ο[ι] ἔτει

[κεφάλαιον ἀν]αλόματος

5

[περιογένητ]ο τῶ λέμματος

[κατὰ τὸ ὄγδ]οον ἔτος

[Ἐπὶ τῆς ἀρχῆς ἡῖ]ς: ἐγραμμάτευε

[.]ν: ἐπιστάται

10

[λέμματα πα]ρὰ κολακρετῶν

[λέμμα περιγ]εν[όμεν]ον: ἐ[κ τῶ]

[προτέρω ἐν]ιαυτῶ

15

ΧΗ

ΗΗ

ΔΓ

ΗΓ

20

—

—

—

—

25 M
 H
 Δ
 —
 X

I add a few comments on the restorations which differ from those finally published by Kirchhoff (*I. G. I.*, 284–288, 545):

Column II:

L. 14—*ὄνεμάτων* or *μισθομάτων τῶι ἔργῳ*, Bannier (*Rhein. Mus.* 1906, p. 218); I have suggested that it is rather the heading for the expenses.

Ll. 15–16—see line 42.

L. 17—*ἄνθρακες*; charcoal appears together with firewood in *I. G. I.*, 319, line 14, and exactly fills the space here.

Ll. 19–20—*καθ' ἡμέραν μισθοὶ κατὰ τὰ εἰρεμένα ἀπόπαχς*, Kirchhoff; cf. Meisterhans (*Grammatik*³, p. 148), Herwerden (*Lexicon*, s.v. *ἀπόπαξι*), and Bannier (*loc. cit.*); but it does not fit the space.

Ll. 22–23—see lines 1–2; Michaelis suggested *κεφάλαιον ῥοιγράφῳ*.

Ll. 24–25—see lines 47–48; Michaelis suggested *κεφάλαιον ποικιλταῖς*.

L. 29—no space is left for this line in the *Corpus*; *πέμπτον* restored for reasons given below (line 53).

L. 34—Kirchhoff read the four extant letters *γενο*.

Ll. 37–39—Pittakys (Ἐφ. Ἀρχ. 1859, No. 3481) represented a second Δ in line 37; Michaelis and Cavaignac (*loc. cit.* p. 75) state that these (31) 21 talents are receipts, but since sums of money would hardly be mingled with the items, it seems more probable that these are the weights of some superfluous material, such as metal, which was sold.

L. 43—see line 17; the indentation of the item column by three spaces is required by fragment D.

L. 45—*ἀπόταχσ[ιν]*, Kirchhoff (*Memorie*, p. 139).

L. 47—I shall attempt later to justify this restoration of the words
 α ον.

L. 51—the indentation of the item column by two spaces is required by fragment D.

L. 53—fragment C almost immediately precedes A, of the eighth year; and there are only six spaces for the numeral, so that *ἑβδόμον, πέμπτον*, etc. are excluded. Köhler suggested that the first letter was B.

Column III:

L. 1—ΞΙΚΑΙΓ, Kirchhoff (*Memorie*, p. 130), evidently a typographical error (Pittakys, Ἐφ. Ἀρχ. 1860, No. 4087, had ΞΙΚΑΙΑ); because of it Michaelis restored *σι καὶ π[οικιλ] . .*; Kirchhoff later corrected it to *ἐπιστάτε]σι καὶ γ . .*; Bannier suggests *λῆμμα τοῖς ἐπιστάτε]σι κα ἔτει* (*Rhein. Mus.* 1906, p. 218).

L. 2—Pittakys did not see these erased letters; Köhler read merely ΤΕ (*Corpus*); the erasure seems to imply that this was only a partial payment of the salaries, or that it included part of the amount due the preceding year.

L. 6—ON, Pittakys, and Kirchhoff restored $\delta\gamma\delta\omicron\omicron\nu$, which was accepted by Michaelis; later Köhler read merely ON, and Kirchhoff restored $\kappa\alpha\tau\grave{\alpha}\ \tau\omicron\ \dots\ \omicron\nu\ \xi\tau\omicron\varsigma$; the curve of the first O actually appears.

L. 8—one of the formulae suggested by Kirchhoff (*Memorie*, p. 134), except that there is not space (as we learn from fragment D) for the number of the $\acute{\alpha}\rho\chi\hat{\epsilon}$.

L. 9—probably three epistatae were named; Bannier supposes that the epistatae were not named, and that they were permanent (*Rhein. Mus.* 1906, p. 217).

L. 10—the plural $\lambda\acute{\epsilon}\mu\mu\alpha\tau\alpha$ restored to fill the space.

Ll. 12–13—the formula restored by Bannier (*Rhein. Mus.* 1906, p. 217 n. 3), except that I add $\lambda\acute{\epsilon}\mu\mu\alpha$ to fill the space.

Since 1873, when the attribution to the Parthenon was definitely abandoned by Kirchhoff, there has been no attempt to identify the construction to which the inscription refers. In the absence of the main prescript, our only evidence is the date as determined from the forms of the letters, the location as implied or suggested by the place of discovery, the estimated duration and cost of the work, and various hints afforded by the items of expenditure.

In the text, the absence of allusions to particular parts of a building, or to processes of construction, is particularly noteworthy; we find merely the general expression $\epsilon\varsigma\ \omicron\iota\kappa\omicron\delta\omicron\mu\iota\alpha\nu$, "for the erecting," which evidently formed a very small part of the expenditure. The only other items which appeared in the fifth and sixth years, besides salaries and wages, are peculiarly significant. One of these items, apparently an annual entry, appears in these two years (Col. II, ll. 17, 43) as [. $\kappa\iota\acute{\alpha}\upsilon\sigma\iota\mu\alpha$, or [. $\kappa\iota\alpha\iota\ \chi\sigma\acute{\upsilon}\lambda\alpha\ \kappa\alpha\iota\upsilon\sigma\iota\mu\alpha$]; both phrases are the same, and I have suggested that the first eight spaces were filled by the single word $\acute{\alpha}\nu\theta\rho\alpha\kappa\epsilon\varsigma$, on the analogy of *I. G. I*, 319, line 14 ($\chi\sigma\acute{\upsilon}\lambda\alpha\ \kappa\alpha\iota\ \acute{\alpha}\nu\theta\rho\alpha\kappa\epsilon\varsigma\ \tau\omicron\iota\ \mu\omicron\lambda\acute{\upsilon}\beta\delta\omicron\iota$). In this other inscription the charcoal and firewood are recorded as having been bought for the melting of the metal for casting the accessories of the bronze statues in the Hephaestum. It is tempting to assume that the fuel was intended also in our own case for the casting of a bronze statue. Then it would be possible to explain another item which appears in these two years (Col. II, ll. 24–25 and 47–48): [.] $\pi\omicron\iota\kappa\iota\lambda\iota[αν\ \dots\dots\ \text{or}\ \acute{\alpha}[\dots\dots\ \omicron\nu\ \epsilon\varsigma\ \pi\omicron\iota\kappa\iota\lambda\iota\alpha\nu]$ $\tau\omicron$ [. respectively. It obviously relates to the purchase of some material for use in decoration. For work in bronze such an accessory material would naturally be silver,

the decoration (*ποικιλία*) then being in the form of chasing or inlaying. This interpretation seems to be confirmed by the fact that the space would be exactly filled by the two words *ἀργύριον ἄσμενον*.

A bronze statue which took at least nine years to build must have been of colossal size. Among bronze statues, it is recorded that the Colossus of Rhodes by Chares required twelve years for its construction, the Mercury by Zenodorus ten years,¹ and the two comparatively small cult statues by Alcamenes in the Hephaestum at least five years.²

It is possible to form an approximate estimate of the expenses for the sixth year, by filling out the gaps in the sums of money, as follows:

(928) for building (remainder from total given below).

385½ for fuel (minimum allowance).

7700 for wages (the other possibility, 3700, is too small).

76 for lead (? or 36, 126, or 166).

382½ for silver (minimum allowance).

1963½ for salaries (amount preserved).

11434½ total expenditure.

782½ surplus (amount preserved).

12217 total receipts (amount preserved).

The sums for the ninth year seem to have been of similar amounts; the few traces preserved on fragment B are of small quantities (1100+, 215+, and 150+), and then at the end (ll. 25-28) appear two larger sums, probably the total receipts (10110+) and the surplus (1000+), so that the total expenditure would have been somewhat more or less than 9110 drachmae. In one of the first three years, on fragments F + E, larger sums are involved, in one case 71036½+, in another 34,807 drachmae; even if we place these on opposite sides of the account, assuming that the former was part of the receipts and the latter part of the expenses, it is clear that the operations may have attained a total as great as 100,000 drachmae. We might estimate, therefore, that the average for the nine years was about 55,000 drachmae, giving for the total cost of the statue about 500,000 drachmae or 83 talents, a sum which would imply that the dimensions were colossal.

¹ Pliny, *N. H.* XXXIV, 41, 44.

² *I. G.* I, 318-319.

From the location of the fragments at the time of their discovery, we must assume that the stele, and, therefore, probably the statue, were set up on the Acropolis.

The form of the letter \leq would place the inscription earlier than 447/6 B.C., when the Parthenon was begun; yet the letters are not archaic, so that the work is clearly post-Persian, probably slightly earlier than the middle of the century.¹

A colossal bronze statue, erected on the Acropolis shortly before the middle of the fifth century, at a cost of about 85 talents, can hardly have been other than the great bronze statue of Athena (the Promachos) by Phidias.

I am aware that in making this identification I am but adding another uncertainty to the many with which the Athena Promachos is surrounded. Date, size, and pose are all as yet undecided. With the pose we are not concerned; but the most reasonable estimates with regard to size and date seem to confirm the evidence of the inscription.

The colossal height of 70 to 80 feet including the pedestal, as suggested by Leake, Cockerell, Beulé, Penrose, Pennethorne, and many others,² is certainly excessive. On the other hand, those who would reduce it to 30 feet including the pedestal, as Michaelis, Milchhöfer, Bötticher, Overbeck, Gurlitt, Collignon, Frazer, Lechat, Gardner, and others,³ are surely too conservative.

¹ Michaelis (*Parthenon*, p. 287) dated it earlier than 436/5; Kirchhoff placed it before 438/7 (*Memorie*, p. 133), and afterwards before 444/3 (*Corpus*); Larfeld places it between 480 and 445 (*Handbuch*, p. 440), or at least before 444/3 (*ibid.* p. 45); Bannier (*Rhein. Mus.* 1908, p. 429) assigns it to about 446/5 B.C.

² Leake, *Topography of Athens*, 1st ed., p. 243 n. 1 and plates, 2nd ed., p. 351; Beulé, *Acropolis*, II, p. 308; Pennethorne, *Geometry and Optics*, p. 35, pl. V; Dyer, *Athens*, p. 437; Penrose, *Athenian Architecture*, 2nd ed., p. x; Harrison, *Studies in Greek Art*, p. 201.

³ Michaelis, *Ath. Mitt.* 1877, pp. 89-90; Milchhöfer, in Baumeister, *Denkmäler*, p. 208, and Waldstein, *ibid.*, p. 1311; Bötticher, *Akropolis*, p. 96; Overbeck, *Gr. Plastik*, 4th ed., I, p. 348; Collignon, *Sculpture Gr.* I, p. 524; Blümner, *Pausanias*, I, p. 303; Busolt, *Gr. Gesch.* III, p. 449 n.; Lechat, *Phidias*, p. 75; Fougères, *Grèce*, p. 44; Hadaczek, *R. Ét. Gr.* 1913, p. 21. A fanciful identification of a bronze Athena at Constantinople with the Promachos has been adduced as evidence for this height; see Gurlitt, *Analecta Graecensia*, 1893, pp. 101-121; Jones, *Select Passages*, pp. 78-80; Frazer, *Pausanias*, II, pp. 349-350; Gardner, *Greek Sculpture*, 2nd ed., p. 281 n. 2; Gardner, *Ancient Athens* p. 213; Gardner, *Six Greek Sculptors*, p. 88; Michaelis, *Arx Athenarum*, pp. 76-77; Judeich, *Topographie*, pp. 101, 216 n.; D'Ooge, *Acropolis*, p. 299; Weller, *Athens*, p. 344.

A better estimate is that of Reisch,¹ based on the dimensions of the foundations, giving 30 cubits. For the pedestal is 5.58 m. square on the euthynteria and 5.28 m. square on the lowest finished course, implying, if we use the approximate ratio 1:3.1 found in other colossi of this period (Athena Parthenos, base 4.096 m. and height 12.75 m., *i.e.* 26 cubits; Apollo Sitalcas, base 4.96 m. and height 15.50 m., *i.e.* 35 cubits), a height of about 16.40 m. or 50 Attic feet including the pedestal. Such a height would bring the crest of the helmet 10 metres below the summit of the pediments of the Parthenon and 6 metres above the summit of the Propylaea. We may assume that the pedestal was about 8 Attic feet in height;



FIGURE 1.—CAPPING COURSE OF PEDESTAL.²

this satisfies the requirements of the few scattered architectural fragments, belonging to a Pentelic marble capping course $1\frac{1}{2}$ Attic feet (0.485 m.) high, carved with a colossal bead-and-reel and egg-and-dart, surmounted by a plain abacus from which the plinth of the statue receded 0.235 m. (Fig. 1),³ and to a die of Eleusinian

¹ Reisch, *Jh. Oest. Arch. I.*, 1906, p. 221.

² Adapted from a photograph of the German Archaeological Institute at Athens, Akr. 662. This block, lying on the site itself, is 1.234 m. long and 0.489 m. high; of the latter dimension the beads occupy 0.081 m., the eggs 0.207 m., the abacus 0.201 m.; the eggs are spaced 0.308 m. on centres. A similar block, 0.482 m. high, is now in the Library of Hadrian, and a fragment in the Acropolis Museum (annex).

³ This capping course was erroneously assigned by Penrose to the cornice of the temple of Zeus Olympius; see *Transactions Royal Inst. Brit. Architects*, 1888, pp. 98, 102; *Athenian Architecture*, 2nd ed., p. 86.

limestone. Then the statue would have been about 42 Attic feet, less, as we should expect, than the Apollo of Calamis at Apollonia, which held the record of 45 feet for the fifth century.¹

At a time when an ordinary portrait statue of life size, or more strictly heroic size (6 Attic feet, 1.96 m.), must have cost about a quarter of a talent,² a colossal statue of seven times life size would have required, according to the law of Sextus Empiricus, the expenditure of about 85 talents.³

As for the date of the Athena Promachos, we have no valid reason for dissenting from the view usually accepted, that it should be assigned to the Cimonian period, the decade before the ostracism of Cimon (461 B.C.).⁴ It would then be the earliest of the three great colossal statues designed by Phidias, all with bases of white Pentelic marble and black Eleusinian limestone, evidently the result of the collaboration of Ictinus: (1) the Athena Promachos, 465-456 B.C.; (2) the Zeus at Olympia, 456-447 B.C.⁵; and (3) the Athena Parthenos, 447-438 B.C.

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¹ Pliny, *N. H.* XXXIV, 39-45, a chronological list of record-breaking colossi.

² The price in the Hellenistic period was twice as much, a half talent; see A. de Ridder, *R. Arch.* 1915², p. 97.

³ See de Ridder, *loc. cit.*; the height, 7 (in terms of life-size statues), is cubed and then multiplied by $\frac{1}{4}$ talent (the value of one life-size statue).

⁴ The objections to this view, and the later dates proposed, are all based on untenable hypotheses. (1) Phidias was supposed by Müller (*Werke*, II, p. 17) to have died leaving it unfinished, since the shield was wrought by Mys and Parrhasius. (2) An extant inscription was supposed by Kirchhoff (*I. G.* I, 333) to have formed the dedication of the base, with letters too late for the Cimonian period; but it has been proved that the letters are too early, rather than too late, for the Cimonian period, and that the stone is in any case too small to have formed part of the base. (3) The Medici torso, of a style as late as 445 B.C. at least, was supposed by Lange and others to be a copy of the Athena Promachos.

⁵ This date of the Olympian Zeus agrees best with the building accounts of the Parthenon; see A. J. A. 1913, p. 71. The work of Ictinus at Olympia during this period is discussed in my *Culmination of Greek Architecture in the Age of Pericles*, to be published by the Metropolitan Museum of Art.

THE ORIGINAL PLAN OF THE ERECHTHEUM¹

Dr. Dörpfeld's recent amplification of his well-known views as to the "Old Athena Temple" on the Acropolis at Athens² is likely to furnish the occasion for a reëxamination of many of the complex problems which his theories involve. As a corollary to his main thesis Dörpfeld restates his position, first presented in 1904, as to the "original plan" of the Erechtheum.³ It is with this feature of his article alone that we are now concerned.

Undoubtedly his brilliant discovery of Mnesicles's contemplated plan for the Propylaea⁴ inspired Dörpfeld to seek a similar solution of the vexed problems connected with the Erechtheum. Few will now venture to question the correctness of his restoration of the original design of the Propylaea. Its unfinished walls, its waiting antae and cornice, its holes for roof-beams argue plainly the anticipated continuation of the building, and the theory has entered so fully into the literature about the Acropolis that further consideration is needless.

In his study of the Erechtheum Dörpfeld relies on evidence which he regards as identical in character with that which he

¹ Since this article was placed in the printer's hands, Dr. Gerhart Rodenwaldt has published in the *Neue Jahrbücher* (24, 1921, pp. 1-13) an article on 'Die Form des Erechtheions,' which touches upon the same problems. Naturally we both have hit upon similar, and in some cases identical, arguments. In the main, however, Dr. Rodenwaldt devotes himself to a justification of the form of the existing building on aesthetic grounds, arriving by a very different course at the same goal. Since our methods of treatment are so distinct, the two articles seem fairly to supplement one another, and I feel at liberty to leave my paper unchanged. In due respect for the inestimable services of Dr. Dörpfeld in the field of Athenian topography I should like to adopt as an expression of my own sentiments a footnote of Rodenwaldt: "*Dem hochverehrten Meister der Erforschung der antiken Architektur fühle ich mich auch in diesem Falle, wo Bedenken gegen eine seiner Hypothesen erhoben werden, zu tiefstem Dank verpflichtet.*"

² 'Das Hekatompedon in Athen,' *Jb.. Arch. I.* XXXIV, 1919, pp. 1-40.

³ 'Der Ursprüngliche Plan des Erechtheion,' *Ath. Mitt.* XXIX, 1904, pp. 101-107.

⁴ *Ath. Mitt.* X, 1885, pp. 38 ff., 131 ff.

found in the Propylaea. He enumerates the asymmetrical plan of the building, the extension of the North Porch beyond the west wall, the lack of a distinctive pilaster at the southwest corner next to the Porch of the Maidens, and the varying supports to the west—tall columns, short columns, Caryatids—which seem to him to point to incompleteness, or at all events to a building not in conformity with the original design of the architect.¹ Upon this evidence he bases the theory that the building was originally meant to extend farther to the west. Its presumable length he determines, from comparative measurements of the rooms of the present building with relation to the axis of

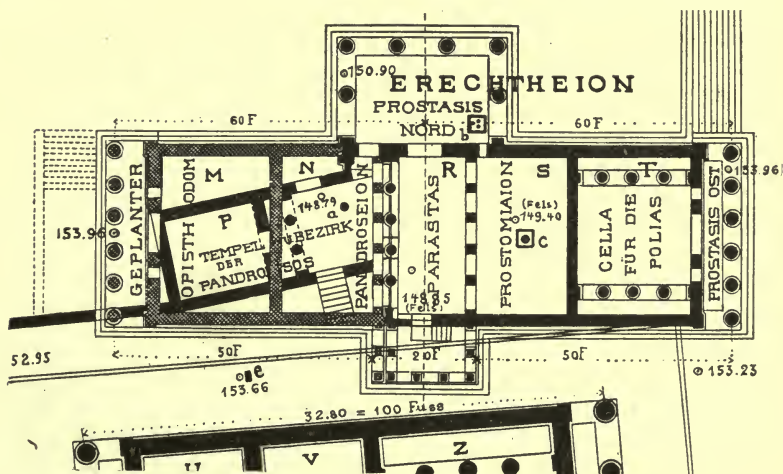


FIGURE 1.—ERECHTHEUM: ORIGINAL PLAN ACCORDING TO DÖRPFELD.

the north and south doors, as 120 Attic feet. In the central rooms he places the divine tokens—well, trident-mark, olive-tree, etc.—as well as the Pandroseum, and apparently the Cecropium. The west room, corresponding to the “cella for the Polias” to the east, he appropriates as an opisthodomus planned to replace the west rooms of the “Old Athena Temple,” and therein finds support for his theory as to the perpetuation of the Hekatompedon (cf. Fig. 1).

This theory of an “original plan” has been received with more or less approbation by various scholars; by some stoutly supported;

¹ Whom in his recent article, p. 13, he calls Mnesicles, perhaps by a slip of memory.

quite as energetically opposed by others.¹ A new investigation of the evidence seems desirable.

In the first place we must determine what indications, if any, are left to show that the architect may have intended, provided the objections of the opponents to his plan were later removed, to prolong the Erechtheum westward. The probable character of such evidence can be seen by comparison with corresponding members of the Propylaea. Confining ourselves to the unconstructed northeast portico of that building (cf. Fig. 2), we find

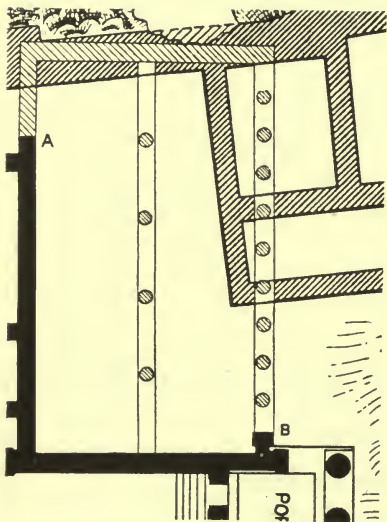


FIGURE 2.—PROPYLAEA: PLAN OF NORTHEAST CORNER SHOWING EXTENSION OF NORTHEAST WALL (A), AND SOUTHEAST ANTA (B).

the following evidences of future intention: (1) a now purposeless outer cornice along the two walls which would become the west and south walls of the portico; (2) a southeast anta which undoubtedly was meant to receive an architrave running north; (3) holes in the side-walls, manifestly for the reception of beam-ends; (4) a now meaningless northward extension of the rear wall of the proposed portico and the foundation upon which it would have been continued. The same sort of evidence is found for the southeast portico and the dwarfed southwest wing. It is to be noted that the proposed additions could

¹ E.g., D'Ooge, *The Acropolis of Athens*, pp. 212-214; Elderkin, *Problems in Periclean Buildings*, pp. 49-58; Petersen, *Die Burgtempel der Athenaia*, p. 6. The theory is briefly outlined in my *Athens and its Monuments*, p. 333, with the caveat that it "cannot be said to have been fully demonstrated,"—a statement which I should now modify.

² Plans and elevations are brought together conveniently in Michaelis, *Tabulae Arcem Athenarum Illustrantes*, pp. XVII-XIX (with partial bibliography); on a smaller scale in D'Ooge, *op. cit.* figs. 79 and 82.

In the first place, if the walls of the Erechtheum were to be extended, the new section must have engaged the present walls at the northwest and southwest corners of the building. We must endeavor to discover how such a juncture could have been effected.

Without doubt the portion of the rear wall of the North Porch which projects beyond the west end of the building is aesthetically disturbing (cf. Fig. 3). How thoroughly it was concealed by the parapet along the "Old Temple" terrace, and possibly by the olive-tree, we cannot know. But even if it were wholly in



FIGURE 3.—ERECHTHEUM FROM SOUTHWEST SHOWING EXTENSION OF WALL IN REAR OF NORTH PORCH.

view, this fact would not necessarily argue for the intention to embody it within the building at a later time, as we shall see.

If this wall were to be prolonged, how could the new section be linked with the existing wall? In order to meet the needs of Dörpfeld's theory, the juncture could be effected only by demolishing this entire corner of the North Porch together with the adjacent corner of the building nearly back to the north door into the west room. This projecting north wall, which is of the height of the Porch, ends in a double anta facing north and south. The architrave of the Porch extends across both antae and bears the same frieze and cornice as in the other parts of the Porch. The antae and the wall between them are finished at top and bottom

with moldings, the wall between being slightly depressed as usual. A double anta of similar form is to be restored at the northwest corner of the southwest wing of the Propylaea,¹ where the two antae, here at right angles to one another, face colonnades. By analogy the south face of the double anta of the Erechtheum should face a west colonnade at the level of the Porch, which is manifestly impossible. In order to prolong the north wall of the Erechtheum, then, this double anta and the entablature above it must be taken down; it would obviously not be feasible to erect the wall without engaging alternate layers. If such an alteration had been contemplated, it would have been easy to provide for it. No provision is made.

The situation at the southwest corner even more plainly defies any kind of juncture, though one may readily grant that the absence of a finished anta like the one at the east end of the south wall is irregular. Nevertheless, with the sort of bonding used in the construction of the building, the supposed prolongation would require complete demolition of the corner up to and including the pediment.

This is not all. Beneath the corner there is no foundation, the weight of the superstructure being supported by a great block, which spans the opening where the foundation is lacking; the wall above the block is lightened to reduce the pressure.² It has long been recognized that beneath this corner reposed some sacred structure which could not be disturbed.³ Clearly this structure must not bear any weight. How far it extended westward we do not know; perhaps for some distance. It is conceivable that by a complete redesigning of the building a longitudinal block might have been laid under the wall from east to west so as to span the space—conceivable but improbable, since the sacred structure in question, judging from the size of the aperture, must have extended eastward almost to the south door, leaving no adequate foundation for the necessary span. Perhaps the door might have been moved, but if the reconstruction demanded such a transfer, the axis on which Dörpfeld's theory largely depends would be dislocated.

The execution of the "original plan" of course implies the

¹ Michaelis, *op. cit.* p. XVII, Nos. 1 and 4.

² Cf. A.J.A., XII, 1908, p. 196.

³ That this object was the grave of Cecrops is far from proved. Cf. Judeich, *Topographie von Athen*, pp. 252 f. for bibliography.

demolition of the west wall of the Erechtheum and the erection, a meter to the west, of a screen-wall like the one supposed to have existed along the east side of this room. As we have seen, the foundation of the west wall fell short of reaching the south corner of the building. Curiously enough the north end of the same foundation also fails to articulate with the adjacent foundation. From this fact the inference has been drawn¹ that the architect changed his mind after laying the foundation, but this does not appear to be Dörpfeld's view. The actual reason for the lack of articulation is unclear. If the architect contemplated a subsequent removal of the west wall, and for this reason left the foundation unjoined, he should, *a fortiori*, have disconnected the upper wall as well. It would have been far more difficult to cut the marble wall and bond it anew.

We must also note that the proposed west screen-wall would have demanded further rebuilding both of the North Porch and of the Porch of the Maidens. At its north end the screen-wall would have partially blocked the small door from the North Porch into the Pandroseum. Either the width of the door must have been reduced to less than a meter, or else the door must have been abandoned altogether. Whichever scheme was adopted, a further destruction of the wall of the Porch would have been necessary.

The new plan would also have required the razing of the Porch of the Maidens, at least to the level of its parapet, and the complete rebuilding of its west end. According to the proposed theory this Porch was to be 20 Attic feet wide, or about three feet wider than it now is. Even if one could admit the possibility of so radical an operation, it is doubtful whether the Porch could be built 20 feet wide, without changing also its other dimensions, including the height of the Caryatids. Not to speak of the probable squat appearance of such a structure, it is worth observing that if the present Caryatids were more widely separated the interspatial relations would be altered from about 2:3 to about 3:3 (that is, width between axes as compared to height of figures), which doubtless would result unpleasantly. It may be that such a contingency might be avoided by moving the Porch bodily to the west,² but this would be an extreme bit of surgery: nor is it Dörpfeld's view.

¹ Elderkin, *op. cit.* p. 49.

² Cf. Penrose, *The Principles of Athenian Architecture*, p. 90.

Even if we be bold enough to believe that the building as constructed could be so maimed—the entire west wall removed, the corner of the North Porch and the Porch of Maidens refashioned—quite as serious an architectural predicament would remain in the construction of the west end of the proposed building. This west end is supposed to contain an elevated room fronted by a colonnade, as at the east. Unfortunately the contour of the Acropolis is here very different. At the east end of the building the surface of the rock is high, and the lowest step needs to be raised only by a single block of poros. On the other hand, the rock to the west slopes rapidly away, and the point where the supposed corner would fall has an elevation above sea-level of about 148 m.¹ as contrasted with the elevation of 153.96 m. for the upper surface of the stylobate of the supposed west colonnade. In other words, at the northwest corner the height of the stereobate would be more than five meters; at the southwest corner it would be approximately a meter less. To reach the top of this foundation from the north would require about sixteen steps of the height of those leading up from the vicinity of the North Porch; and the upper step would crowd back nearly to the middle of the colonnade. Even if we were to assume a fill of two meters rising to the level of the bottom of the steps of the North Porch, we should still have a sort of Roman podium about three meters high. Beneath the temple of Victory Athena at the west end of the Acropolis we do find a lofty bastion, but the conditions are quite different. So, too, are those of the foundation of the “Old Temple,” which is high at the northwest corner but fades into nothing at the southwest corner, affording an easy approach from the west. It may be that some sort of a bridge or causeway from the “Old Temple” terrace would meet the requirements. Such a solution, however, could hardly be suggested seriously, but it is scarcely more absurd than the flight of steps which Dörpfeld builds from the terrace down to the Pandroseum, in order to enable Pausanias to meander about this complex of buildings.

In the disposition of the unequal heights of the stereobates at the northwest corner, another perplexity would arise. At the

¹ This elevation is estimated from the figures given in Cavvadias und Kawerau, *Die Ausgrabung der Acropolis*, pl. 3, where the nearest elevations are 147.45 m. and 148.50 m., slightly northwest and southwest, respectively, of the required point. The elevation of the stylobate of the North Porch is 150.96 m. according to Kawerau's plan, not 150.90 m. as in Fig. 1 above.

northeast corner the peculiar terrain veils the unusual juncture. Here the difference would stand out boldly. A person looking at the building from the northwest would see to his right a lofty podium surmounted by colonnade, entablature, and pediment, while to his left his eye would drop abruptly to the foot of a plain wall at the level of his feet, an unprecedented relationship. Without the impossible fill the contrast would be still more marked.

The three rooms between the "*opisthodom*" and "*die cella für die Polias*" (N; R, S in Fig. 1 above) Dörpfeld calls the "Pandroseion" the "Parastasis," and the "Prostomiaion"; this nomenclature is dubious, but need not now be discussed. In the first of the three rooms, of necessity, he places the sacred olive-tree; of course this would preclude the existence of a floor. In the third room, he thinks, was the well; this room, too, would have no floor. The middle room was entered from the north and south doors; it must have had a floor. In passing, it may be noted that this floor would be distinctly higher than the levels of the adjacent rooms and, on the sides, especially to the east, could be reached only by steps, which Dörpfeld omits.

That the high walls on all sides of the olive-tree might interfere with its growth Dörpfeld evidently considers of no moment, but the oversight is not negligible.¹ The wall to the west, only four or five meters from the tree, would rise a dozen meters above its roots. To the east a similar wall would stand from two or three to, at most, fourteen or fifteen meters away. Roughly estimated, the entire tree would receive the direct rays of the sun not more than four and, perhaps, less than two hours a day. It might also be interesting to know how widespread the tree's branches were and whether an aged olive-tree, growing as it normally would, could find space at all within so contracted quarters. Here enters a nice horticultural problem in which an archaeologist must not meddle!

In order to make consistent his theory of an hypaethral Pandroseum, Dörpfeld is driven to a still more remarkable doctrine, namely, that the other two rooms of this series were also hypaethral, and furthermore, that the two west rooms of the present building had no roof. This is pure assumption. No hint of such a construction is to be found in the side-walls. What is more, the theory disregards the almost certain restoration of the

¹ Cf. Judeich, *op. cit.* p. 246.

ceiling of these rooms made on the basis of the building inscriptions,¹ not to speak of the extraordinary phenomenon of a free-standing west wall, with windows or gratings, columns, and pediment, but with no roof behind the pediment! It is also difficult to surmise the purpose of screen-walls two feet thick dividing the rooms, if the space were hypaethral. The matter of drainage, too, would introduce interesting problems. But, since the question is not primarily related to the present inquiry, its discussion may be omitted.

If we are now ready to grant that the building might have been extended according to the alleged plan, how long would it have been? Dörpfeld makes the length wholly dependent upon certain relations of the internal measurements of the present building. The distance from the central axis of the east colonnade to the east face of the east cross-wall is 30 Attic feet; from the same face of the east cross-wall to the east face of the west cross-wall the distance is figured as 20 feet; from the same face of the west cross-wall to the central axis of the north and south doors, 10 feet: $30+20+10=60$. Reverse the figures, he says, and you have the corresponding dimensions for the west half of the supposed building: $10+20+30=60$. The conclusion is strange enough. In the first place, we must find a parallel for such a correlation in existing Greek architecture. Certainly it does not obtain in Athenian buildings, not even in the "Old Temple," for which the Erechtheum was to be a substitute. So far as the concatenation of figures is concerned, one might go a step further. From the axis of the north and south doors to the east face of the present west wall the distance is 5 feet. Now the series will be: $30+20+10+5$; *ergo*, the original plan must have placed the west wall where it is. Or, the distance from the axis of the doors to the west face of a hypothetical west wall of the usual thickness and in line with the southwest anta of the North Porch would be 15 feet;² *ergo*, the architect intended to build the west wall at this new point. Would he had done so! Truth is, the series is specious, and it loses all measure of validity if the figures be inaccurate. According to the most convincing division of the west half of the building the rooms were really 19 and 12 feet in length

¹ Hill, 'Structural Notes on the Erechtheum,' *A.J.A.* XIV, 1910, pp. 291-297.

² Measurements based on Stevens's excellent plan in *A.J.A.*, X, 1906, p. 48, fig. 1.

from east to west.¹ Counting the walls two feet thick, the series now becomes $30+21+9$, or, if we measure the rooms alone, $22\frac{1}{2}+21+9$. But if one measures from the axis of the east colonnade, why not also from the axis of the cross-walls? Whereupon the figures become $31+20+9$, or better $31+21+8$. Or, let us measure the rooms alone, and the series will be $22\frac{1}{2}+20+10$, or, $23\frac{1}{2}+21+8$. Juggle the figures as you will, in any event the magic of the tens vanishes, and with the tens falls the theory.

In the face of the objections which have been suggested it seems impossible to maintain the theory of the "original plan" which Dörpfeld offers. To be sure, in his recent article he insists that the antagonisms which were met caused the architect to change his plan before the building was begun.² This does not obviate the difficulties, but augments them. If an architect so constructs his building that to alter it in harmony with an assumed plan demands the destruction of an extensive portion of what he builds, we shall find it hard to believe without corroborating literary evidence that the suggested plan was ever in his mind; divination alone would suffice to discover his thought. If, again, we find the suggested plan virtually impossible of construction on accepted principles, the objections to it become insuperable. What the architect did, we have. We may cherish suspicion and doubt, but no archaeological proof of a different plan is tenable except in the presence of such telltale tokens of future intention as Dr. Dörpfeld so cleverly disclosed in the Propylaea. Of such intention in the case of the Erechtheum he has not adduced any positive evidence.

So far as we can determine, then, the original plan of the Erechtheum was the one upon which the building was actually constructed. Its complexities may never be fully resolved. One must freely admit that the construction of the west end is obscure. Here the architect must have been constrained on every hand. The old temple of Pandrosus stood in his way, and near by rose the sacred olive-tree, its branches overspreading the altar of Zeus Herceius. Along the north and west sides of the precinct, known generally as the Pandroseum and perhaps containing other venerated objects, ran a high wall, which enclosed the area. From the outset the architect and his mentors must have known that this precinct was inviolable. The nature of the

¹ Hill, *op. cit.* p. 295 and fig. 2.

² *Op. cit.* p. 14.

sacred objects—the temple, the tree, etc.—shows that they could not be covered.

Obviously nothing could be done but to make the best of a difficult situation. The temple of Pandrosus was joined by the architect to his new building (*συνεχής*, Paus. I, 27, 2), probably to the south of the west door, where the retracted foundation and unfinished wall above it suggest that the space was hidden.¹ The west door was removed to one side, in order to provide access between the old and new temples. A large block spanned the opening which must be left under the southwest



FIGURE 4.—ERECOTHEUM FROM WEST.

corner. The North Porch was widened so as to engage the north wall of the precinct and to accommodate a side door from the Porch into the Pandroseum.

We must not forget that in ancient times an observer looking at the Erechtheum from the west or southwest enjoyed a different aspect of it from the one which we have today. Westward the precinct wall rose high enough to conceal nearly all of the west end of the building below the columns. Along the "Old Temple" terrace stretched a parapet at least as high as the feet of the Maidens of the South Porch, and the olive-tree also shut out a part of the view. Furthermore, it is not unlikely that some other structure—possibly of wood, like the gratings between the west

¹ Cf. *Ath. Mitt.* II, 1877, pp. 31 ff.

columns, but perhaps belonging to the structure which reached under the corner of the building—abutted against the corner and also acted as a screen; certainly some elevated object had at least a visual connection with the “metopon” within the building at this corner, for the “metopon” and its adjuncts, including the open intercolumniation, were made for a purpose more definite than merely to lighten the wall. Under the circumstances, therefore, the architect’s handling of his difficult task becomes quite irreproachable (cf. Fig. 4).

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A GROUP OF ROMAN IMPERIAL PORTRAITS
AT CORINTH

[PLATES V-VII]

DURING the course of the excavations conducted at Old Corinth by the American School of Classical Studies at Athens in 1914-1915 there came to light the remarkable series of Roman portrait sculptures which are to be considered in this and subsequent articles. These comprise no less than eight major pieces, of which four have their features sufficiently well preserved to admit of a probable identification, while two others may be determined through fairly plausible conjecture. In addition to the eight just mentioned there was found a large number of fragments of works of a similar sort, most of which are too small to permit of restoration yet which are of some interest in themselves and in that they serve also to throw light on the more important works.

All the larger sculptures as well as the great majority of the fragments date apparently from the Roman imperial period and show strong resemblances both in style and technique. The material throughout the series is a Pentelic marble of uniformly fine grain, and the works themselves almost without exception were unearthed at the level of Roman stratification and well within the same general excavation area. This area is located at the southeast corner of the ancient market place and comprises a considerable space above and to the south of the spring Pirene. Here were uncovered the foundations of a large rectangular building of the Roman period (Fig. 1), a structure solidly and even magnificently built and apparently of considerable importance. From its size, shape, rich marble decoration, and in particular the number of bronze and bone *styli* found within its confines it seems probable that the building served as a *basilica*. All the statues save one of minor importance were unearthed within its limits, and it seems entirely probable that in it—or perhaps on it—they were originally set up.

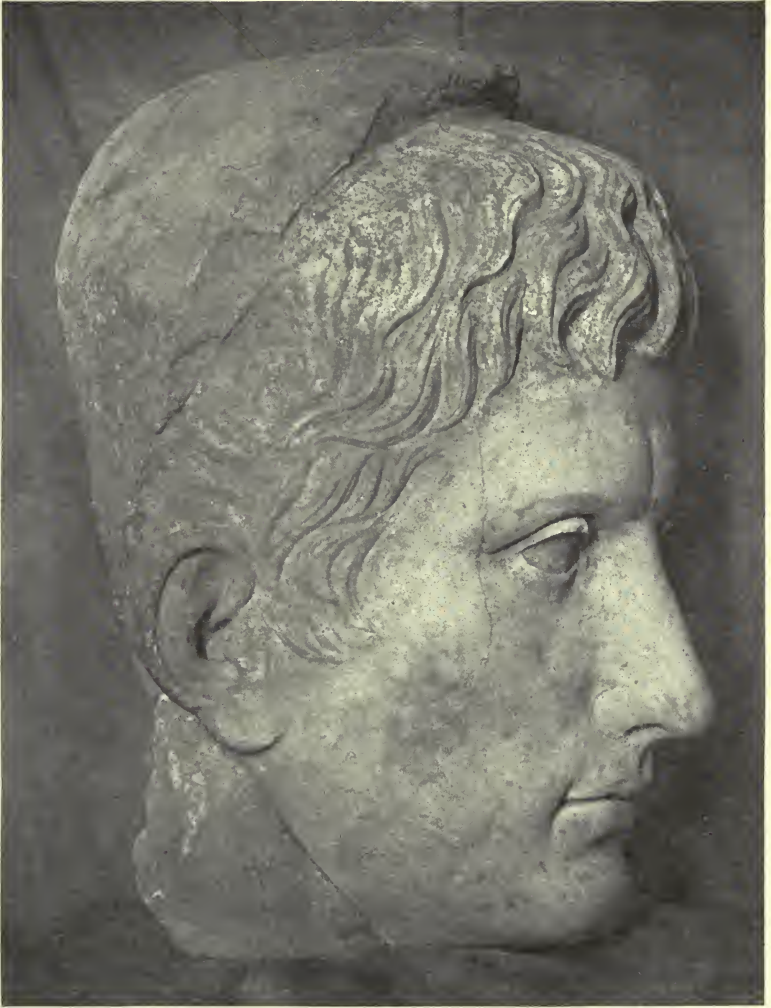


PORTRAIT STATUE OF AUGUSTUS: CORINTH.





HEAD OF AUGUSTUS: CORINTH.



PROFILE OF AUGUSTUS: CORINTH.

In my study of the group I shall present the individual portraits in the order of certainty of identification, those pieces offering least difficulty in that respect being first considered. They will then be discussed together as probable constituents of a single historic group, the date and occasion for the setting up of which may perhaps be determined. In an additional section I shall consider in its broader aspects the question of the sculpture of the imperial period in Greece, with the more specific problem



FIGURE 1.—ROMAN BASILICA: CORINTH.

of the neo-Attic school in Greece. And finally, an attempt will be made to prove that in imperial Roman portraiture there were ordinarily used standard types or canons which originated in Rome in authoritative works and were sent out in the form of clay or waxen models—“*imagines*”—to be reproduced in monumental form in the provinces.¹

¹ I wish to acknowledge my indebtedness for valuable criticism and suggestions in the preparation of this and the following papers to Dr. B. H. Hill, Director of the American School of Classical Studies at Athens, and to Professor G. W. Elderkin of the Department of Art and Archaeology of Princeton University.

I. AUGUSTUS

This statue of Augustus (PLATES V, VI, and VII) was discovered lying apparently as it had fallen,¹ imbedded in a thick stratum of broken Roman tiles, marble fragments, small stones and debris at a depth of between three and four meters and well within the northwest corner of the Roman basilica mentioned above.² The figure rested on its right side with the head slightly lower than the rest of the body, and had apparently been thrown down with great violence. It seems probable that it stood originally on an upper floor of the building, had been shaken from its basis by an earthquake which destroyed the basilica itself, and had fallen through to the basement with the debris of the shattered roof and walls; from the time of its fall and the general destruction of the building it had not been disturbed. Immediately above it was an accumulation of early Byzantine debris, and just over the shoulder of the statue passed the foundations of a small wall of the same period, its base resting on the stratum of Roman tiles and marble fragments in which the figure was imbedded.

The statue itself is considerably larger than life-size and, with the exception of the hands, is preserved from the crown of the head to the middle of the lower leg, its total height being 2.00 m. (cf. PLATE V).³ The left hand and the right hand and forearm were made in separate pieces and attached by means of strong dowels, the cuttings for which still remain. Although the feet and legs are lacking from below the middle of the shin, there were found in the same stratum with the statue itself two marble fragments of a large left ankle which must certainly have belonged to the figure. At the back of the ankle a perpendicular line of breakage indicates that the leg was reënforced by a marble

¹ Bernoulli, *Römische Ikonographie*, II, 1, pp. 53-54, in giving the "*Fundorten*" of the portraits of Augustus listed by him, mentions none of Greek provenience, and only one—doubtful, from Constantinople—as from the whole eastern half of the Roman Empire. The Corinthian Augustus, then, appears to be a unique work in Greece.

² Basilicas were often used to receive imperial portraits. Cf. Bernoulli, *op. cit.* II, 1, p. 22, ". . . indem man annehmen darf, dass in jeder einigermaßen nennenswerten Stadt, in den meisten Basiliken und offiziellen Versammlungsorten, auf allen ihm geweihten Triumphbögen und in allen seinen Tempeln eines oder mehrere dergleichen (Bildnisse) aufgestellt waren."

³ Further dimensions; greatest width .75 m., length of neck .115 m., length of face .185 m., width of face .165 m., height of forehead .05 m., length of nose .075 m., from nose to chin .065 m., width of mouth .053 m.

"tree trunk," or support of some sort. The rim of the heavy loop of drapery passing down the right side of the body is more or less chipped (cf. PLATE V), as are also the horizontal roll at the waist beneath the right elbow and the edge of the veil over the crown of the head (cf. PLATE VI). Elsewhere, save for minor abrasions, the drapery is well preserved.

The material is a good grade of Pentelic marble in which appear, however, a few veins of silvery schist or mica; a particularly well-marked vein runs the whole length of the right side passing just in front of the right arm, over the right shoulder, and diagonally through the back of the neck and head from right to left. Along this vein several breaks occur, particularly those about the head and face.

The statue is a draped male figure represented in the guise of a priest, or magistrate engaged in pouring a sacrificial libation, the upper folds of the rich ceremonial toga being drawn over the head to form a sacrificial veil.¹ The weight of the figure is supported on the right leg, while the left is slightly bent at the knee and extended forward. The left arm is bent nearly horizontal at the elbow with the forearm extended supporting the heavy folds of drapery which fall along the thigh and leg. The right forearm, now lacking, was advanced to the right and was bare. Many analogies may be quoted for the pose and the general handling of the drapery.² The right hand probably held a *patera*, the usual

¹ Cf. Daremberg et Saglio, *Dict. des Antiq. Grecques et Romaines*, s.v. *sacrificium*, Rome II,—“In public sacrifices celebrated in the name of the state, the one who sacrificed was a magistrate, *consul* or *proconsul*, *praetor* or *propraetor*, or *sacerdos*. . . . The sacrificing priest or magistrate, if he wished strictly to observe the *ritus Romanus*, had to sacrifice *velato capite*, i.e., covering with his toga the whole top of the head and back of the neck,—the so-called *cinctus Gabinus*, for which cf. Servius, *Ad Aen.* V, 755. The origin of this custom is not known, but cf. *Aeneid*, III, ll. 403–409. The veiling occurs on numerous monuments, among them: 1. Roman coins. Cf. Daremberg et Saglio, *op. cit.* figs. 6004, 6005; also Cohen, *Med. Imp. Rom.*, I, pl. IX, No. 18; 2. Ara Pacis. Cf. Daremberg et Saglio, *op. cit.*, fig. 6006; also Petersen, *Ara Pacis*, plates; 3. The Augustus of Otricoli. Cf. Helbig, *Führer*, 2nd ed., No. 327; 4. Statue of a priest in the Vatican. Cf. Visconti, *Museo Pio-Clem.* III, 19; also Clarac, *Musée du Louvre*, pl. 768 b No. 1909; 5. Several reliefs of the Column of Trajan. Cf. Cichorius, *Die Reliefs der Traianssäule*, pls. XXXVIII and LXXVI; 6. Relief of Marcus Aurelius sacrificing, Palazzo dei Conservatori. Cf. Helbig, *op. cit.*, No. 561.

² The following are the most important: 1. Augustus veiled, in Vatican. Cf. Overbeck, *Gesch. der Gr. Plastik*, II, fig. 234 g; Duruy, *Hist. des Rom.* III, p. 725, cut. In this figure the pose of body, position of legs and arms, and pose

attribute of this type of figure.¹ The head is turned rather sharply to the right, and the gaze follows the general direction indicated by the right arm; the eyes appear to be focused on a point at some little distance, but their expression is not of great intensity. The ears are rather prominent and, as usual in this type of veiled head, appear to be pushed forward by the edge of the veil which passes just behind them.²

The head and face were found in three separate pieces the largest of which comprises the neck with the back and top of the head, the left ear with the hair just above it, and the folds of the

of head are almost exactly similar to the Corinthian Augustus; the drapery is also very like, though more voluminous and lacking the remarkable loop or *sinus* at the right knee (cf. our Pl. V). 2. Augustus veiled, in Royal Museum, Madrid. Cf. Reinach, *Rep. de la Stat. Grecque et Romaine*, I, p. 563, pl. 916 A, No. 2337 A; Hübner, *Antike Bildw. zu Madrid*, No. 78; Bernoulli, *op. cit.* II, 1, p. 39, No. 63. Here also the pose is very similar, but the drapery much freer and more voluminous. 3. Augustus veiled, in Borghese Museum, Rome. Cf. Reinach, *op. cit.* II, p. 578, No. 8; Nibby, *Mon. Borgh.* pl. 10; Bernoulli, *op. cit.* II, p. 32, No. 25; Helbig, *Führer*, No. 896 (edit. 1891). Here the position of the legs is reversed, but the treatment of the drapery and the pose of arms and head are almost identical with the Corinthian Augustus; the *sinus*, however, does not fall so sharply, and extends only to the right knee and not below it.

¹ Cf. Darenberg et Saglio, *op. cit.* s.v. *patera*,—"It is often put in the hands of magistrates, emperors, and divinities themselves." See also s.v. *sacrificium*, fig. 6004, a Roman coin on which is a male figure in a toga, head veiled, pouring a libation from a patera in the right hand upon a flaming altar. Cf. also Augustus as Pontifex Maximus in Vatican, Overbeck, *op. cit.* II, fig. 234 g; also Duruy, *op. cit.* III, p. 725. Of this statue Helbig, *op. cit.* No. 319, remarks: "Left hand and right forearm with patera restored. . . . The toga pulled up over the back of the head indicates that he was represented as sacrificing, probably with reference to his position as Pontifex Maximus, and that the restoration of the *patera in the right hand is thus correct*." Cf. also Reinach, *op. cit.*, I, p. 451, pl. 768 B. No. 1909; I, p. 579, pl. 940 A, No. 2398 B; I, p. 583, pl. 945, No. 2422; II, p. 578, No. 8.

² Cf. for this trait the portrait head of Tiberius at Corinth (to be published as the second paper of the present series); also the following works: Statues of Augustus as Pontifex Maximus, *e.g.* 1. In Royal Museum, Madrid. Cf. Reinach, *op. cit.* I, p. 563, pl. 916 A, No. 2337 A; Hübner, *op. cit.* No. 78; Bernoulli, *op. cit.* II, 1, p. 39, No. 63, "*mit abstehenden Ohren*." 2. In Borghese Museum, Rome. Cf. Reinach, *op. cit.* II, p. 578, No. 8; Nibby, *Mon. Borgh.* pl. 10; Bernoulli, *op. cit.* II, 1, p. 32, No. 25; also Helbig, *op. cit.* No. 896. Draped figures in the same pose, *e.g.* 1. In Royal Museum, Turin: "*prêtre voilé*," Reinach, *op. cit.* I, p. 451, pl. 768 B, No. 1907 A. 2. In Aquileia. Cf. Reinach, *op. cit.* II, p. 579, No. 7; Bernoulli, *op. cit.* II, 1, p. 154, No. 55; *Leipziger Illus. Zeit.* Feb. 1884, p. 136.

veil down the left side. The face, front of head, and right ear form a second fragment which was not found until a day or so after the body appeared. The violence with which the statue was thrown down had caused the stone to split neatly along the line of the mica-flaw above mentioned, and had sent the face sliding a meter or two northward amidst the debris. Nevertheless the face shows scarcely a scratch (cf. PLATES VI and VII). The third fragment is a fold of veil which extends between the right shoulder and neck.

When the statue was first brought to light the hair still preserved numerous traces of a flat wash of color a deep red in tone; upon the surface of the eyeballs the painted outline of iris and pupil could also be clearly traced, and the lips were still enlivened with a transparent reddish tinge.¹ It seems probable that, in its original condition, the red pigment of the hair served merely as an under-coating or sizing upon which gilding was applied, a conclusion strengthened by the notice of Suetonius (*Div. Augustus*, 79) to the effect that the hair of Augustus was naturally of a yellowish tinge, *capillum subflavum*.² At all events the total effect of the coloring was astoundingly life-like and far from displeasing to the eye; unfortunately, however, the color faded rapidly upon exposure to the air. In general the statue shows but slight traces of atmospheric weathering, and hence must have stood under cover; it is somewhat marked with ground and root stains. The drapery though dignified is rather heavy and is finished with no great care. The rear of the figure is very sum-

¹ Polychromy in Roman sculpture; cf. the following: Boeckler, 'Die Polychromie in der antiken Sculptur', *Jahresbericht der Realschule zu Aschersleben*, 1882; He gives a résumé of the literary sources and supplements it by a description of ancient sculptures showing traces of polychromy, mentioning several works of the Roman period, none of which, however, are portraits. R. Delbrück, *Bildnisse Römischer Kaiser*, p. 4; 'Zum Schluss sei bemerkt dass die Porträts der Kaiserzeit polychrom waren, mit hellen oder dunklen Haaren und Brauen, farbigen Augen, roten Lippen, ähnlich wie auf den Mosaiken, z.b. von Justinian I und Theodora in San Vitale zu Ravenna, taf. XLIII, XLIV. Davon sind freilich höchstens Spuren da.' Cf. also taf. VI, and Delbrück, *Antike Porträts*, taf. 34. H. Blümner, *Technische Probleme aus Kunst und Handwerk der Alten*, Berlin 1877, p. 10; He gives a general bibliography on the subject, extending from 1826 to 1872.

² Cf. also Boeckler, *op. cit.*, who mentions an archaistic Diana from Herculaneum, now in the Naples Museum, reproduced in color in Walz, *Ueber die Polychromie der antiken Sculptur*, taf. I, No. 1. He says 'Das Haar ist von einer rötlichen Farbe und scheint ursprünglich vergoldet gewesen zu sein.'

marily treated, simply blocked out without detail of drapery or finish of surface, a fact which indicates that the statue was to be set up against a wall or within a niche and at a level well above the eye of the spectator.¹

In the matter of technique several points are worthy of notice. First, the drill was used rather freely in working the deeper folds of drapery, and more particularly where undercutting was necessary as, for instance, between the veil and the sides of the neck, and on the crown of the head between the front edge of the hood and the hair just beneath it (PLATES V and VI); in positions of this sort little care was taken to obscure the traces of drilling. On the flesh surfaces, however, the instrument was used much more carefully, yet slight traces are discernible inside the nostrils, at the inner corners of the eyes, inside the ears, and at the corners of the mouth. The flesh surfaces are smoothly worked but unpolished, and upon close examination show clear marks of tooling, both with the fine-point and the fine-tooth chisel. The modelling of the face is firm though somewhat lacking in subtlety of finish, and seems to have been deliberately conventionalized; it lacks entirely that individuality and force of character which appears so strikingly in the Augustus of the Vatican from Prima Porta.² The hair across the forehead is freely and thickly worked, yet here also a certain conventionalism is apparent in the treatment of the individual locks which is quite in keeping with the general character of the portrait. The gaze, which is directed slightly downward and to the right, lacks concentration and purpose due largely to the fact that the eyes are not opened to their full extent, but more directly to the flat and impressionistic treatment of the eyeball.³ The lids are clearly worked and are given considerable relief even at the outer corners. A point worthy of notice is that the eyes are not deep-set as in the majority of portraits of Augustus, and yet, due to the flattening of the eyeballs and to the roll of flesh beneath the brows at the outer corners, an effect of depth

¹ Cf. our Pl. VII. The Augustus of Prima Porta was treated in this same manner, according to Bernoulli, *op. cit.* II, 1, p. 27.

² Cf. Brunn-Bruckmann, *Denkmäler*, taf. 225.

³ Cf. Pls. VI and VII. This in general is characteristic of the period, although the slight hollowing of the pupils which became common in the time of Hadrian appears also in the Augustan period, *e.g.*, in the Augustus of Prima Porta, cf. Bernoulli, *op. cit.* II, 1, taf. I; and in the Berlin Tiberius, cf. Furtwängler, *Die Sammlung Sabouroff*, taf. XLIII; also Brunn und Arndt, *Gr. und röm. Porträts*, taf. 19-20.

is produced without at the same time any great individualization. The brows themselves though straight and well marked are rather generalized in treatment as is also the characteristic Augustan frown between the eyes. The same may be said of the mouth and nose, though the former does not lack a certain delicacy and strength. To my mind the work may be briefly summarized as follows: First, its most striking characteristic is the strict conformity to an apparently well-established type. Second, realism is not attempted or desired,—in fact the portrait is generalized, consciously academic in treatment, and seems clearly the work of a man who had had no opportunity of studying his subject at first hand, in spite of the fact that iconographic details are meticulously represented (*vide infra*). Finally, in marked contradistinction to the majority of contemporary works done at Rome there is here displayed that persistently Greek trait of idealization which presents to us Augustus, not as he was in life, but as the visible embodiment of the benignity and moderation of the Roman rule.

Thus far I have assumed that we had to do with a portrait of Augustus. Although this assumption could scarcely be challenged by anyone familiar with the Augustus type in sculpture it is nevertheless advisable to review briefly the iconographic criteria which prove the attribution.

The Augustan physiognomy, once seen and studied in a portrait such as that from Prima Porta or the bust in Munich,¹ is never forgotten; the features, clear cut, refined, powerful, are indelibly impressed on the memory, and one feels instinctively that here, indeed, was a man worthy to be the founder of the Roman Empire. Though comparatively few of the extant portraits appeal to the observer with the compelling authority of the masterpieces just mentioned, and all show great diversity both in conception and treatment, there are certain outstanding characteristics which may fairly be taken to represent the features of Augustus as they were in the flesh. These are a broad forehead with massive flatly arched skull, brows clear cut, angular, and drawn together in a slight frown between the eyes,² nose slightly aquiline, its profile drawn in slightly both above and below the bridge,³ a nobly and delicately formed mouth, a regularly

¹ Brunn-Bruckmann, *op. cit.* pl. 45.

² Cf. Suetonius, *Div. Aug.* 79, . . . "*supercilia coniuncta.*"

³ Cf. Suetonius, *loc. cit.* "*nasum et a summo eminentiorem et ab imo deductiorem.*"

modelled, deeply grooved chin coming forward to the perpendicular plane of the lips, thin cheeks, ears slightly projecting,¹ hair abundant and curling² and arranged across the forehead and before the ears in gracefully curved locks which, in spite of their rather negligent and apparently fortuitous disposition,³ nevertheless recur in a scheme which remains practically unchanged throughout the whole series of Augustan portraits. The general expression is serious, somewhat cold, perhaps, but often, when relieved by a gesture or a turn of the head, is imperious and majestic.⁴

A glance at PLATES V, VI, and VII will satisfy the reader that this description is applicable almost word for word to the Corinthian Augustus. Yet two objections may be urged, the first and most important of which is that the nose of the Corinthian head is obviously not aquiline; in fact, when seen in profile (PLATE VII) it appears almost straight, the indentations above and below the bridge being scarcely perceptible. Analogies are to be found for this, however, in several well authenticated portraits.⁵ The second objection—of minor importance—is the comparative fullness of the cheeks and the general softening of the lower part of the face, a treatment which while detracting somewhat from the individuality of the portrait is clearly idealistic in purpose. It is this, of course, which explains the classic line of the nose, and here we see carried almost to excess that tendency to soften and idealize which is the most outstanding characteristic of the portrait as a whole. Any lingering doubt as to the authenticity of the work is finally resolved by a study of the arrangement of the hair. As already indicated, this one trait furnishes, perhaps, the most trustworthy criterion of identification throughout the whole series of portraits of Augustus; in fact it often

¹ Cf. Suetonius, *loc. cit.* "*mediocres aures.*"

² Cf. Suetonius, *loc. cit.* "*capillum leviter inflexum et subflavum.*"

³ Cf. Suetonius, *loc. cit.* . . . "*quamquam et omnis lenocinii negligens et in capite comendo tam incuriosus, ut raptim compluribus simul tonsoribus operam daret.*"

⁴ Cf. Suetonius, *loc. cit.* . . . "*Vultu erat vel in sermone vel tacitus . . . tranquillo serenoque. . . . Oculos habuit claros ac nitidos, quibus etiam existimari volebat inesse quiddam divini vigoris, gaudebatque, si qui sibi acrius contuenti quasi ad fulgorem solis vultum summitteret.*"—The foregoing description is drawn largely from Bernoulli, *op. cit.* II, 1, pp. 55–56.

⁵ *E.g.*, nude statue in Vatican, Bernoulli, *op. cit.* II, 1, p. 29, No. 13, pl. III; toga-clad statue in Vatican, Bernoulli, *op. cit.* II, 1, p. 31, No. 18, "*Der Nasenrücken ist von gleichmässiger Breite, im Profil unmerklich gebogen.*"

happens that, in the case of an attribution otherwise extremely doubtful, the appearance of the characteristic Augustan arrangement of the hair across the forehead is sufficient to clinch the argument.¹ In the present instance, though not strictly necessary for the purpose of identification, it may prove of interest to make a few comparisons in this sense with certain other well known portraits of the emperor.

We begin with the Prima Porta Augustus and compare our PLATE V with Bernoulli, *op. cit.* II, 1, pl. I. The same full curling locks are at once apparent, and on closer examination it is evident that the scheme of arrangement is identical, the main parting falling to the left of the centre of the forehead which is marked by a heavy lock curving slightly to the right. At the left of the parting two broad, flat locks scarcely separated one from another pass across the brow to the left temple in an almost unbroken line. To the right the arrangement is more varied. Here again are two locks, but freely and distinctly treated, each in high relief and curling sharply back toward the middle of the forehead; the forward-curving masses in front of the ears are in each case identical. It should be noted in passing, however, that, from the point of view of artistic method and conception, the treatment of the hair in the two works is very different; in the Prima Porta head the locks are plastic, crisp, more individual in character, whereas in the Corinthian Augustus the impression is rather that of generalization,—the locks seem heavy, stiff, schematic. In fact the difference is exactly what might be expected between the work of an artist who had, perhaps, seen and studied his subject in person, and that of a sculptor working from a formal model or canon. Other portraits in which appears the characteristic Augustan "*Stirnhaar*" are: 1. A head in the Capitoline Museum,² 2. A nude statue in the Vatican,³ 3. A toga clad statue in the Vatican, Sala a Croce Greca,⁴ 4. A bronze head in the Museo Profano of the Vatican,⁵ 5. A bust in Munich.⁶ This list could be greatly extended if further proof were desired.

The question at once arises as to the explanation of the remarkable fixity and persistence of a feature in itself so palpably for-

¹ Cf. Bernoulli, *op. cit.* II, 1, p. 58.

² Cf. Bernoulli, *op. cit.* II, 1, p. 23, No. 2, fig. 1.

³ Cf. Bernoulli, *op. cit.* II, 1, p. 29, No. 13, pl. III.

⁴ Cf. Duruy, *op. cit.* III, p. 725 *cut*.

⁵ Cf. Bernoulli, *op. cit.* II, 1, pl. IV.

⁶ Cf. Brunn-Bruckmann, *op. cit.* pl. 45.

tuitous and ephemeral, a characteristic which appears practically unchanged not only in the portraits of Augustus in his prime, but even in those of his youth and childhood.¹ Up to the present time no attempt has been made to answer this question; in fact it has not been explicitly formulated.² It seems quite logical to suppose that a "canon," if such it may be called, was established by an early and authoritative work which doubtless received the official sanction of Augustus himself. This assumption, however, goes but part way. Granted the establishment of a type in Rome shortly after the accession of Augustus to power, how was this spread throughout the length and breadth of the empire, from Gaul and Spain on the west to Greece and Egypt on the east?³ Obviously not by the exportation from Rome of finished works of sculpture,—a procedure not only improbable in itself but disproved by the clearly local character of the material and workmanship of the great majority of portraits discovered outside the immediate vicinity of Rome. It seems highly probable, therefore, that the type was spread abroad by the official exportation of clay or waxen *imagines*, somewhat like those commonly displayed at funerals,⁴ the very purpose of which was to assure iconographic uniformity in whatever province or district an imperial portrait should be set up. The foregoing is too much in the nature of a digression to permit of its being treated at length in the present context. I shall revert to it, however, in my discussion of the remaining portraits of the Corinthian group.

Though not a work of the first order, the Corinthian Augustus claims a high rank among the more idealized portraits of the emperor, the most striking characteristic of which is a subtle quality of agelessness, an impression of youth in maturity combined with Olympian dignity and calm. This is further accentuated by a certain breadth of conception, as well as the softening of the characteristic frown, and the lessened relief of the cheekbones. The greater regularity of the line of the nose is especially noticeable as is also the broader handling of the mouth and chin

¹ Cf. Bernoulli, *op. cit.* II, 1, pl. II.

² Cf. Bernoulli, *op. cit.* II, 1, p. 57–58,—“*Sollte der Haarwurf und die Haartracht des Augustus wirklich diesen stabilen Charakter gehabt haben? Oder beruht die Gleichartigkeit vielmehr auf dem Bestreben der alten Künstler, an dem einmal erfundenen Typus auch in diesen scheinbaren Zufälligkeiten festzuhalten?*”

³ Cf. the bronze head of Augustus from Meroe, published by Garstang and Bosanquet in *Ann. Arch. Anth.* IV, 1911, pp. 45–52, 66–71.

⁴ Cf. Dio, LVI, 34, for mention of such an image of Augustus.

and of the surface modelling generally. Although the portraits embodying the idealistic conception of the emperor are fairly numerous, the following appear the more important and afford the closest analogies to the type of the Corinthian Augustus:—

1. The so-called Caligula in the Galleria delle Statue of the Vatican,¹ to be compared particularly with our PLATES V and VII. This shows by far the closest affinities in conception, type of face, and technique to the Corinthian portrait, and the resemblance feature for feature is very striking. Note the same broadly ideal handling of the lower half of the face, particularly the mouth and chin, the full modelling of the cheek and forehead, and the grave and candid expression of the eyes; even the hair, though sparser and less rigid, shows the same stylistic peculiarities, while the characteristic turn of the head—here reversed—produces the same effect of individuality and charm. One might almost suppose that the work were by the same hand,—certainly under the influence of the same school. It is to be noted further that this portrait produces, as does that of Corinth, an impression of maturity and judicial calm in general lacking in the majority of portraits of Augustus, which are characterized rather by youthful concentration and immediacy.

2. A bust in the Glyptothek at Munich.² Here the analogy is less striking, since the conception though ideal is more individualized; while the modelling appears very subtle it is also more virile, and the hair is distinctly impressionistic in treatment. The pose of the head is very like.

3. The head in the Chiaramonti Museum, Rome.³ To be noted particularly is the pose of the head and neck, similar broad handling of the mouth and chin, and general tendency toward idealization.

4. The mail clad portrait in Berlin.⁴ This shows close resemblance in pose of head and in profile (cf. our PLATE VII), as well as in the general idealistic conception.

5. A bust in the Louvre.⁵ The features are strongly idealized and the work shows close stylistic affinities to the Munich bust (No. 2, above).

¹ Bernoulli, *op. cit.* II, 1, pl. III, p. 29, No. 13.

² Cf. Brunn-Bruckmann, *op. cit.* pl. 45; also Bernoulli, *op. cit.* II, 1, fig. 9.

³ Cf. Bernoulli, *op. cit.* II, 1, fig. 3.

⁴ Cf. Berlin *Winckelmann's Programme*, 1868, pl. 1.

⁵ Cf. Duruy, *op. cit.* III, p. 686, cut.

6. The bronze head from Meroe.¹ The difference between bronze and marble technique does not permit of exact comparison, and the head is here mentioned only as a remarkable example of the ideal conception of the Augustan features so skillfully embodied in the Corinthian portrait. Compare with our PLATE VI.

7. A bronze head in the Vatican.² This also shows ideal treatment. Compare with it PLATE VI.

From the foregoing comparisons it is evident that the Corinthian statue is worthy of a place of honor in the great series of Augustan portrait heads. We have now, however, to consider briefly the figure as a whole.

When once the observer becomes aware of the considerable reduction in the height of the figure occasioned by the loss of feet and legs from mid-shin downwards and makes due allowance for the apparent changes in proportion thereby effected, he realizes that the most outstanding characteristics of the entire figure are its slim and graceful proportions, breadth and squareness of shoulder, and powerful rendering of neck and throat. In fact, were the bodily forms divested of the clinging folds of the toga they would be found to vary little from the slender and athletic canon of Lysippus as interpreted and modified by Pasiteles and Stephanus.³ Furthermore, the impression of neo-Atticism is much heightened by certain mannerisms in the handling of the drapery,—I refer particularly to the straight schematic folds which depend from the left forearm, the modelling of the tunic across the chest and on the right shoulder, and finally the remarkable way in which the toga clings to the thighs and lower limbs, producing as it were the illusion of transparency despite the obvious weight of the drapery itself. A unique feature is the sharp loop—the so-called *sinus*⁴—formed below the right knee by the uniformly narrow and rather “stringy” fold which falls from behind the right shoulder and passes diagonally upward across the lower part of the body. In the great majority of *statuae togatae* this *sinus* receives a totally different treatment.⁵

¹ Cf. R. Delbrück, *Bildnisse Römischer Kaiser*, pl. V (Berlin, 1914); also A. J. A. 1912, p. 114, fig. 1.

² Cf. Bernoulli, *op. cit.* II, 1, pl. IV.

³ Cf. statue of a youth by Stephanus in the Villa Albani, Brunn-Bruckmann, *op. cit.* pl. 301; *University Prints*, pl. 321.

⁴ Cf. Iwan von Müller, *Hdbk. der Klass. Alt.-Wissensch.*, volume on *Die Röm. Privataltertümer*, by H. Blümner, p. 212 (ed. 1911); cf. also Smith's *Dict. of Greek and Roman Antiq.*, s.v. *toga*.

⁵ Cf. the toga clad figures listed in the Appendix.

It is well known that Augustus was singularly attached to the toga as the Roman national dress and that he strove to restore it to its former position of honor in the use of everyday life.¹ Yet of the toga clad statues of Augustus² comparatively few are authentic, and of these the majority represent him with head veiled in priestly fashion, a method by which at least the emperor was distinguished from the common run of senatorial and municipal statues; all the extant *togatae* of Augustus in which this veiling is lacking have heads either inset, or foreign to the torso, while on the other hand most if not all of the veiled busts belonged originally to *effigies togatae*.³

Our study of the Corinthian Augustus is fittingly concluded by a discussion of the probable date of the work, and in this our conclusions must depend upon internal rather than external evidence, inasmuch as the data furnished by the excavation of the statue are not sufficiently exact for our purpose. For instance, the only certain inference to be drawn from the ruins of the basilica in which the portrait was discovered is that the building was erected not long after 46 B.C. on the foundations of an earlier Greek structure, and that it was destroyed by earthquake in the late Imperial or early Byzantine period. What, then, are the criteria?

The most obvious is the apparent age of Augustus as represented, yet this is somewhat vitiated by the circumstance of the ideal and "ageless" character of the portrait. The emperor appears before us in his prime, or, perhaps, slightly beyond it; but, nevertheless, due to the generalization of the modelling, the ideal fulness and maturity of the forms, it is difficult if not impossible to decide whether he should be placed in the late thirties, the late forties, or even in the fifties. As a matter of fact, however, but two portraits are known in which Augustus is certainly represented as more than fifty years of age,⁴—and in the great majority of cases the sculptor seems to have set the upper limit at forty-five. Beyond this the emperor is ageless and serene as the immortal gods. So far, then, as one can judge from the features them-

¹ Cf. Suetonius, *Div. Aug.* 40.

² According to Pliny, *N. H.* XXXIV, 17, *vid.* Overbeck, *Schriftquellen*, 2350, portrait statues were classified by the Romans in two main groups, *togatae effigies*, and *statuae Achilleae*.

³ Cf. Bernoulli, *op. cit.* II, 1, pp. 69–70.

⁴ Bust in the Vatican, Bernoulli, *op. cit.* II, 1, p. 30, No. 14, fig. 5; bronze bust in the Louvre, Bernoulli, *op. cit.* II, 1, p. 37, No. 57, fig. 7.

selves, the statue may have been set up at any time between *ca.* 25 B.C. and 14 A.D., or, for that matter, even after the death of Augustus.

A more reliable criterion is perhaps seen in the veiling of the head, yet even here there is considerable diversity of opinion among authorities as to the interpretation of this interesting feature. It has been variously connected with the office of Pontifex Maximus,¹ the apotheosis of the emperor, and a form of consecration in which the *genius* of the emperor takes an important part. The first hypothesis seems to be destroyed by the fact that, although Augustus did not assume the pontificate until 12 B.C. when he was fifty-one years old, the features in the case of the majority of his veiled portraits are those of a young man. The theory of the apotheosis also presents difficulties, inasmuch as a clear example of the indication of deification merely by the veiling of the head is not to be found in the period of the Julian emperors; and the deified emperors always wear the rayed crown in addition to the veil.² Finally, there seems even less ground for the supposition that the veil was restricted to representations of the *genius* of the emperor. There is no doubt that the motive of the veil, though in no way the usual or only method of representation of the imperial *genius*, was yet here and there applied to it. On the other hand the costume seems to have been the rule for the ordinary *genii familiares*, who also invariably have the cornucopia as attribute. If, therefore, the latter is lacking, we cannot safely conclude that a *genius* is intended.³

It seems, then, that we are forced to the conclusion that, in the case at least of Augustus, the veiling of the head refers either to some subordinate priestly office, or that the emperor is represented merely in the general function of a person officiating at a sacrifice. Since, however, the portrait at Corinth represents Augustus as a man of mature years we may at least be permitted the assumption of the date of his entering upon the pontificate, 12 B.C., as a probable *terminus post quem* for the work under discussion. Furthermore, if the rayed crown is to be considered at this period as a mark of deification, the lack of it in the case of a portrait of an emperor known to have been deified ought to indicate

¹ Visconti, *Museo Pio-Clem.* II, p. 292.

² Cf. Divus Augustus on the well-known Paris Cameo and the Vienna Onyx.

³ For a fuller discussion of this entire topic see Bernoulli, *op. cit.* II, 1, pp. 69-72.

that the work was completed before the death of the personage represented. Thus we have the year of Augustus's death as a probable *terminus ante quem*. It is between these two dates, 12 B.C. and 14 A.D., that I believe the Corinthian portrait should be placed, and between these rather wide limits we shall leave it for the present. I expect, however, from the study of the other members of the group to be able to reduce the margin considerably.¹

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¹ The following portraits of Augustus may be added to the number of those already listed by Bernoulli:

1. The Corinthian Augustus.
2. A portrait statue found in Rome. (*R. Arch.* XVI, 1910, p. 162, from *Journal des Débats*, June 26, 1910; *A.J.A.* 1911, p. 98; published fully by L. Mariani in *B. Com. Rom.* XXXVIII, 1910, pp. 97-117; 3 pls., 6 figs.)
3. Augustus as Mercury, formerly called Germanicus, statue in Louvre. (*J. Six, R. Arch.*, 5th series, IV, 1916, p. 257; 2 figs.; *A.J.A.* 1917, p. 461.)
4. Marble head in the Boston Museum. (*B. Mus. F. A.* V, 1907, pp. 1-3; figs. 1-4; *A.J.A.* XI, 1907, p. 369. This is the head from the Despuig collection; idealistic type.)
5. Marble head in the Boston Museum. (S. N. Deane, *Thirty-first Annual Report of B. Mus. F. A.* 1906, pp. 55-61; *A.J.A.* XI, 1907, p. 369, fig. 9.)
6. Colossal bronze head discovered at Meroe, now in British Museum. (*Ann. Arch. Anth.* IV, 1911, Garstang pp. 45-52, and Bosanquet, pp. 66-71; 5 plates; Ippel, *Ath. Mitt.* XXXVI, 1911, pp. 361-363; cf. also Delbrück, *Bildnisse Röm. Kaiser*, taf. V.)
7. Augustus as Pontifex Maximus, relief from Ara Pacis. (Studniczka, *Abh. Sächs. Ges.* XXVII (No. 26), 1909, pp. 899-944; 7 pls.; 5 figs.)
8. Roman relief with two figures, one apparently of Augustus, in the Museum of University of Pennsylvania. (Paper read by Professor Bates before the Archaeological Institute of America, December 1911, *A.J.A.* 1912, p. 101.)

As to the material and scale of the portraits of Augustus (cf. Bernoulli, *op. cit.* II, 1, pp. 76-78). There may now be added to Bernoulli's list five more in marble, two reliefs, and one in bronze. The Corinthian portrait conforms to the great majority of the extant portraits of Augustus in scale, since it is rather more than life size.

APPENDIX

List of references to statues of type similar to the Corinthian Augustus, with short discussion of the more important.

Draped Statues of Augustus:

1. In Louvre. Reinach, *op. cit.* I, p. 137, pl. 271, No. 2327; Bernoulli, *op. cit.* II, 1, p. 36. No. 51.

Same general pose, head unveiled, weight on right leg. Bernoulli says "*Der Kopf ist aufgesetzt und der Statue fremd.*"

2. In Louvre. Reinach, *op. cit.* I, p. 139, pl. 275, No. 2332; Bernoulli, *op. cit.* II, 1, p. 36, No. 53; Duruy, *op. cit.* IV, p. 90 cut.

Same general pose, head unveiled, weight on right leg, drapery differently treated and more voluminous. Bernoulli says "*Erst hier wurde ihm an Stelle des nicht passenden Kopfes ein Augustuskopf aufgesetzt.*"

3. In Florence, Galleria dei Uffizi. Reinach, *op. cit.* I, p. 561, pl. 914, No. 2333; Bernoulli, *op. cit.* II, 1, p. 34, No. 40; Dütschke, *Ant. Bildw.* III, No. 40.

Weight on left leg, face to left, head unveiled, toga draped over right shoulder and arm. (This cut must have been reversed in process of reproduction, since the toga is never thus worn.) Bernoulli says "*Der Kopf aufgesetzt, aber wohl antik.*"

4. In Madrid, Royal Museum. Reinach, *op. cit.* I, p. 563, pl. 916 A, No. 2337 A; Hübner, *Ant. Bildw. zu Madrid*, No. 78; Bernoulli, *op. cit.* II, 1, p. 39, No. 63.

Weight on right leg, face to right and head veiled, toga draped over left shoulder and horizontal left forearm, drapery more freely treated; veil passes just behind ears causing them to project. Bernoulli says "*Der Kopf aufgesetzt, aber zugehörig . . . mit abstehenden Ohren . . . Augustus als junger Mann.*"

5. In Rome, Vatican. Reinach, *op. cit.* I, p. 565, pl. 920, No. 2337; Helbig, *Führer*, No. 319; Bernoulli, *op. cit.* II, 1, p. 31, No. 18; Duruy, *op. cit.* III, p. 725, cut; Overbeck, *Gesch. der Gr. Plastik*, II, fig. 234 g.

Weight on right leg, the left slightly to rear, face to right, head veiled, right forearm extended holding patera; the drapery, and pose of body and head are remarkably like.

6. In Rome, Vatican, Sala Rotunda. Reinach, *op. cit.* I, p. 565, pl. 920, No. 2338; Helbig, *op. cit.* No. 310; Bernoulli, *op. cit.* II, 1, p. 31, No. 16; Alinari photograph, No. 6580; Duruy, *op. cit.* III, p. 771, cut.

The so-called "Genius of Augustus." In pose almost identical with No. 5 above; patera in right hand and cornucopia on left arm, drapery is voluminous. Bernoulli says "*In dem Händen Schale und Füllhorn, die erstere neu.*" Helbig adds that the work is correctly restored.

7. In Cataio. Bernoulli, *op. cit.* II, 1, p. 35, No. 46; Dütschke, *op. cit.* V, No. 760.

Bernoulli says "Toga-statue, with back of head veiled, in the hands a gilded patera and a large gilded lituus (both restored). The head appears to me modern, and not Augustus, though Dütschke takes it for antique."

8. In Borghese Mus., Rome. Reinach, *op. cit.* II, p. 578, No. 8; Nibby, *Mon. Borgh.* 10; Bernoulli, *op. cit.* II, 1, p. 32, No. 25; Helbig, *op. cit.* No. 896.

Weight on left leg, ears pushed forward by veil, patera in right hand, drapery

and pose of arms and head almost identical. Helbig says "*Der Kopf aufgesetzt aber antik und zugehörig.*"

Draped figures in the pose of Augustus:

1. In Royal Museum, Turin. Reinach, *op. cit.* I, p. 451, pl. 768 B, No. 1907 A.

"*Prêtre voilé*"; weight on right leg, the left to rear, face to front. Veil conceals left ear but pushes the right forward; general scheme of drapery and sinus much the same.

2. In Royal Museum, Turin. Reinach, *op. cit.* I, p. 451, pl. 768 B, No. 1908.

"*Prêtre voilé*"; weight on left leg, face a bit to right, drapery very similar to the above but more voluminous.

3. In Museo Pio-Clementino, Rome. Reinach, *op. cit.* I, p. 451, pl. 768 B, No. 1909. Helbig, *op. cit.* No. 329; Friedrichs-Walters, *Gipsabg. zu Berlin*, No. 1677; Alinari photograph, No. 6642; Brunn-Bruckmann, *Denkmäler*, pl. 169.

"*Prêtre voilé*"; weight on right leg, face slightly to right, patera in extended right hand, and the pose almost identical; drapery and veil are much fuller and very differently treated.

4. In Naples Museum. Reinach, *op. cit.* I, p. 552, pl. 900 C, No. 2284 D.

"*Statue municipale*"; weight on left leg, face to right, right arm extended forward at elbow; drapery almost identical save that the sinus is above knee and not so sharp.

5. In Mattei Collection, Rome. Reinach, *op. cit.* I, p. 558, pl. 910, No. 2318 C; Bernoulli, *op. cit.* I, p. 157, No. 17; Weisser, *Bilder-Atlas*, taf. 39, 9; Duruy, *op. cit.* III, p. 228 cut.

Caesar; weight on left leg, face to right, right arm extended, drapery much the same but lacks the sharp sinus below the knee.

6. In Mattei Collection, Rome. Reinach, *op. cit.* I, p. 579, pl. 940 A, No. 2398 B; Bernoulli, *op. cit.* II, 1, p. 394; *Mon. Matth.* I, 83.

Head and veil modern. Weight on right leg, patera in right hand, drapery rather similar, with a heavy sinus just below the knee.

7. In Capitoline Museum, Rome. Reinach, *op. cit.* I, p. 583, pl. 945, No. 2422; Bernoulli, *op. cit.* III, p. 108, No. 2; Bottari, III, 55; Righetti, I, 116.

Hadrian. Weight on left leg, head veiled and ears concealed, extended right forearm with patera.

8. Coke Collection, England. Reinach, *op. cit.* I, p. 589, pl. 957, No. 2459 A; Michaelis, *Anc. Marbles in Gt. Brit.*, Holkh. 31; Bernoulli, *op. cit.* III, p. 207, No. 11.

Pose and drapery very similar, but sinus is rounder and falls above the knee; drapery more ample.

9. In Aquileia. Reinach, *op. cit.* II, p. 579, No. 7; *Leipzig. Illus. Zeitung*, Feb. 1884, p. 136; Bernoulli, *op. cit.* II, 1, p. 154, No. 55.

Tiberius. Weight apparently on right leg, drapery and pose of arms very like, head veiled and ears pushed forward.

ARCHAEOLOGICAL DISCUSSIONS¹

SUMMARIES OF ORIGINAL ARTICLES CHIEFLY IN CURRENT PUBLICATIONS

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GENERAL AND MISCELLANEOUS

A Handbook of Archaeology for Travellers.—The British Museum has published a small handbook entitled *How to Observe in Archaeology: Suggestions for Travellers in the Near and Middle East* (London, 1920; 103 pp.; cuts). An introductory chapter by G. F. HILL is followed by a chapter on archaeological method by W. M. FLINDERS PETRIE, describing the necessary material outfit for archaeological work, and dealing with methods of recording discoveries, drawing and copying, photography, etc. The other chapters give summary accounts of the kinds of antiquities which may be found in Greece (J. P. DROOP), Asia Minor (J. G. C. ANDERSON and J. L. MYRES), Cyprus (J. L. MYRES), Central and North Syria (D. G. HOGARTH), Palestine (R. A. S. MACALISTER), Egypt (W. M. FLINDERS PETRIE), and Mesopotamia (H. R. HALL). The illustrations are line drawings of types of pottery and other small antiquities, and tables of alphabets and hieroglyphs. An appendix gives the laws of the several countries of the Near East relating to the excavation and exportation of antiquities.

Classical Antiquities in the University of Pennsylvania Museum.—A recent number of *Mus. J.* (XI, 1920, pp. 3-50, 4 pls.) is devoted to a general description of the Mediterranean collections of the Museum, prepared by ELEANOR F. RAMBO. It includes descriptions of the Cretan and Cypriote antiquities, Greek and Italic vases, Etruscan pottery, bronzes, etc., ancient glass, classical sculptures, and reproductions of ancient art.

Antique Glass.—A brief discussion of the various kinds of antique glass and its uses is written by R. PARIBENI in *Rass. d'Arte*, VII, 1920, pp. 154-157 (8 figs.).

Bronze Harness-Ornaments.—In *B. Soc. Ant. Fr.* 1919, pp. 206-208, is a communication from GEORGES CUMONT regarding a series of puzzling objects of bronze published by A. Héron de Villefosse: sockets of bronze flanked by

¹ The departments of Archaeological News and Discussions and of Bibliography of Archaeological Books are conducted by Professor DEANE, Editor-in-charge, assisted by Professor SAMUEL E. BASSETT, Professor C. N. BROWN, Miss MARY H. BUCKINGHAM, Dr. T. A. BUENGER, Professor HAROLD R. HASTINGS, Professor ELMER T. MERRILL, Professor LEWIS B. PATON, Professor A. S. PEASE, Professor S. B. PLATNER, Professor JOHN C. ROLFE, Dr. JOHN SHAPLEY, Professor A. L. WHEELER and the Editors, especially Professor BATES.

No attempt is made to include in this number of the JOURNAL material published after December 31, 1920.

For an explanation of the abbreviations, see pp. 108-109.

two bronze rings. Franz Cumont and other scholars have thought that the two flanking rings were designed for the passage of reins. Georges Cumont objects that the rings show no sign of wear within; that they sometimes have lateral openings which would make them impracticable for the use suggested; and that they are often irregular in shape. He thinks the objects in question were simply ornaments of the harness, and compares with them a harness-ornament which appears in old prints representing Neapolitan scenes of the early nineteenth century.

The Magic of Solomon.—In *B. Com. Rom.* XLVI, 1918, pp. 85–100, G. CALZA discusses the magic art of Solomon in the Graeco-Roman literary and artistic tradition.

Manuscripts Collected by Minoides Mynas.—In *C. R. Acad. Insc.* 1919, pp. 308–311, H. OMONT adds some notes to a former account of the discovery of Greek manuscripts at Mount Athos and in the Orient by Minoides Mynas, 1840–1855 (see *Mém. Acad. Insc.* XL, pp. 337–421). Through a recent gift the following manuscripts from Mynas' collection have been added to the Bibliothèque Nationale: (1) a fragment of the tenth century containing the maritime law of Rhodes; (2) a fifteenth century copy of the *Epanagoge Aucta*, a manual of Graeco-Roman or Byzantine law; (3) a diary of Mynas' visits to Mount Athos, with description of and transcripts from the manuscripts which he had examined.

The Origin of the Semitic Alphabet.—In *J.R.A.S.* 1920, pp. 297–303, A. H. SAYCE discusses certain non-Egyptian graffiti discovered by Petrie at the traditional Sinai. The characters are Egyptian, but are not used with Egyptian values. They are usually written in vertical columns, and are read from right to left. Most of the phonetic values have been determined. They are the initial letters of the Semitic words that correspond to the Egyptian hieroglyphs. The use of the Egyptian hieroglyphs as alphabetic letters suggested to some Semitic genius the employment of them to represent the initial sounds of the Semitic words with which they corresponded. Naturally more than one hieroglyph could be employed for this purpose in the case of each letter, and accordingly we find at Sinai two different pictographs representing the letter *l*, while the South Arabian alphabet when compared with the Phoenician not only shows additional characters needed to express sounds that had been lost further north, but also variant forms of the same letter. These Sinaitic inscriptions probably belong to the period of the eighteenth dynasty.

Silver in Prehistoric and Proto-Historic Times.—In *Archaeologia*, LXIX, 1920, pp. 121–160 (14 figs.) W. GOWLAND discusses the mining, smelting and general use of silver in early times. It is not found in Europe until the Bronze Age, and objects of silver are rare north of the Alps as late as the epoch of La Tène. In Babylonia it was in use as a monetary standard as early as Manishtusu of Kish (ca. 4500 B.C.). A silver vase dedicated by Entemena, king of Lagash, dates from the same period. In Egypt silver was still rare in the twelfth dynasty, though known in late prehistoric times. It was found in the First City at Troy, and in great abundance in the Second City, which is supposed to date from about 2500 to 2000 B.C. In Crete very little silver has been discovered, the earliest objects dating from Middle Minoan times. Many silver vessels were found in the shaft graves at Mycenae; one in Grave I was 2 ft. 6 in. high and 1 ft. 8 in. in diameter. The silver used at Mycenae, like

that at Troy, was obtained by cupellation from argentiferous lead, as analysis proves. The Mycenaeans probably obtained it from Laurium by surface workings. These mines had ceased to be productive in Homeric times, but as a result of discoveries made early in the fifth century B.C. they were reopened and operated until the time of Strabo. Since 1864 they have again been worked. They do not yield true silver ore, but galena and cerussite, so that lead is the first product of the smelting. Remains of the furnaces used by the Greeks at Laurium have been found in sufficient number to make a restoration certain. The Hittites obtained silver from the Taurus range where there are numerous ancient workings. In Etruria a silver fibula has been found dating from 1000-900 B.C., but there is no evidence of mining there, and most of the silver objects which have been brought to light were probably imported.

The Ustinow Collection.—In *Videnskapselskabet Skrifter*, II, Hist.-filos. Klasse, No. 3, pp. 3-28 (29 figs.) F. POULSEN discusses selected sculptures from the collection in Christiania of the late Baron Ustinow, for many years a resident of Jaffa: (1) a primitive bronze statuette of Syrian origin, to be dated in the ninth or eighth century B.C.; (2) a marble male torso, 0.86 in height, in the style of Critius and Nesiotes; (3) a fragmentary head of Zeus in marble, resembling the Serapis of Bryaxis; (4) a marble bust of the aged Sophocles, in the form of a herm (Fig. 1), the original of which is to be dated early in the fourth century; not, however, a literal portrait; (5) a marble bust of Olympiodorus, also of herm shape (Fig. 2), from an original of



FIGURE 1.—AGED SOPHOCLES:
CHRISTIANIA.

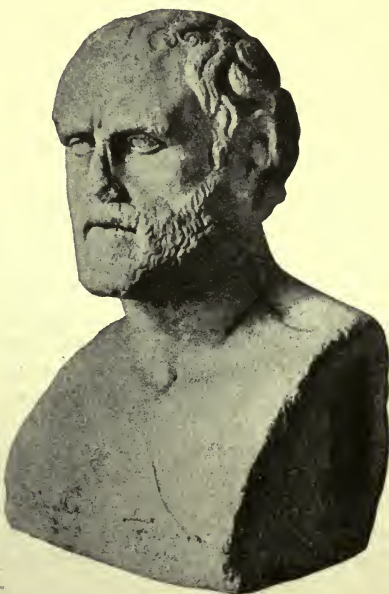


FIGURE 2.—OLYMPIODORUS:
CHRISTIANIA.

the early Hellenistic period; (6) a Roman child's head, in marble, the coiffure of which indicates the dedication of the child to Isis (Fig. 3).

Wooden Barrels of the Roman Period.—In *R. Ét. Anc.* XXII, 1920, pp. 207–209 J. BREUER describes fragments of barrels found on the site of the colony of Olpia Noviomagus (Nymegen), in Holland, and gives a list of sites in Scotland, Germany, and Holland where other evidence of the Roman manufacture of barrels has been found.

Ritual Significance of Gestures.—In *R. Hist. Rel.* LXXX, 1919, pp. 30–85, W. DEONNA, maintaining that many attitudes of divine figures in late classical art which have usually been interpreted as *genre* motives are really of religious

origin, examines the associations of the gesture of the raised arms, and concludes from a study of Egyptian, Babylonian, Hittite, Greek, and Roman monuments that this gesture is especially connected with deities of light, and was originally motivated by some actual burden supported by the arms. Later it was adopted by worshippers of these deities as an attitude of adoration.

It is frequently accom-



FIGURE 3.—PORTRAIT HEAD OF A CHILD:
ROMAN: CHRISTIANA.

panied by cosmic symbols, and is found in representations of those deities of whom Apollo and Aphrodite are the counterparts among the Greeks. Attitudes in which only one hand is raised are also found to have religious meaning and are common to Apollo and Aphrodite as luminary deities.

The Problem of Totemism.—In *R. Hist. Rel.* LXXX, 1919, pp. 86–153, 193–270, A. VAN GENNEP continues his studies on the nature and origin of totemism. In sections XXI–XXV he discusses totemism in Northern Africa in ancient and modern times, and its relation to totemism in other parts of Africa. In XXVI–XXX he deals with the general problem of totemism, with much reference to the beliefs of North American Indians, and gives a table of the several theories on this problem, followed by a brief exposition of his own view, which he describes as *classificatoire, parentale, et territorialiste (sociale)*.

What Is Soma?—In *J.R.A.S.* 1920, pp. 349–351, E. B. HAVELL throws new light on the plant from which the *soma*, or sacred drink of the Vedas was manufactured. The Vedas state that the plant resembled cows' udders, that it was like the fingers of a man's hand, that it was tawny in color, and that it grew on the mountains. The Brahmanas state that *dūb* and *kusha* grass might be substituted for it. In view of these facts it is probable that the *soma* plant was *Eleusine coracana*, or *rāgi*, the common millet still used in the eastern Himalayas for making the intoxicating drink known as *marua*.

EGYPT

Egyptian Antiquities in the Museo Nazionale, Rome.—In *Ausonia*, IX, 1919, pp. 1–10 (pl.; 5 figs.) G. FARINA describes some Egyptian objects in the Museo Nazionale, including (1) the upper part of a statue in dark granite, representing a king of the Middle Empire; (2) a fragment of a granite relief, representing gods and religious ceremonies, Ptolemaic; (3) an anthropoid mummy-case, Ptolemaic; (4) a limestone capital, quadruple campaniform, Ptolemaic; (5) a fragment of a statuette of a seated lady, green granite, Ptolemaic; (6) a fragment of a statue of a kneeling figure, in serpentine, Roman date; (7) a statuette of a woman seated on a throne, basalt, Roman date; (8) a statuette of Bes, black basalt, Roman date; (9) a statue of a Pharaoh in black basalt, Roman date.

Egyptian Coinage of the Ptolemaic and Earlier Period.—In *R. Ital. Num.* XXXIII, 1920, pp. 5–70, A. SEGRÈ gives an account, dependent in large measure on the study of papyrus-documents, of the circulation and evaluation in Egypt and neighboring lands of Ptolemaic and pre-Ptolemaic coins. It is prefaced by a summary of the beginnings of coinage in the ancient world, and by a survey of actual Ptolemaic coins, the latter depending mainly on the well-known Greek work of Svoronos.

The Festival of Adonis.—In *R. Ét. Gr.* XXXIII, 1920, pp. 169–222, G. GLOTZ bases upon a fragmentary papyrus (*Flinders Petrie Papyri*, III, No. 142) and on Theocritus XV a detailed reconstruction of the program of the three days' festival of Adonis celebrated in Egypt under Ptolemy II. The cult of Adonis, organized in Alexandria by Arsinoë, was so successfully propagated by Philadelphus as a part of Egyptian religion that Adonis Osiris came to be regarded in late times as an Egyptian god imported into Phoenicia. The first day of the festival, the seventh of an unnamed month, was a day of joy, the one described by Theocritus; the second a day of mourning and abstinence; and the third a day of mysteries, in which the sacred pantomime of the resurrection of Adonis was performed at the *deikterion*.

A German Prophetess in Egypt.—An ostrakon from Elephantine, originally published by Dr. Schubart in *Ber. Kunsts.* XXXVIII, p. 328, is the subject of comment by T. REINACH in *R. Ét. Anc.* XXII, 1920, pp. 104–106. It contains the names of several officers and other functionaries attached to the staff of the prefect of Egypt. The most interesting of these is βαλουβουργ, described as Σήρωνι σιβίλλα(ι). The reading should probably be Σέμωνι. The prophetess Walburg apparently belonged to the same nation in the region of the Elbe as Ganna, the German prophetess mentioned by Dio Cassius (LVII, 5, 3). Her name recalls the Walpurgisnacht.

The Gnomon of the Idios Logos.—In *Ber. Kunsts.* XLI, 1920, pp. 72–90 (fig.) W. SCHUBART describes an important papyrus, of which he has already published a scientific text (*Der Gnomon des Idios Logos*, I, Der Text, Berlin, 1919). This document gives in detail the regulations by which the Idios Logos, as a branch of the financial administration of Egypt under the Romans, was governed. A complete translation, together with a commentary on the historical significance of this papyrus, is given.

BABYLONIA AND ASSYRIA

The Tower of Babel.—The opinion is generally accepted that the tower mentioned in *Genesis*, xi is to be identified with the *ziggurat*, or temple-tower, *E-temen-an-ki*, that stood in front of *E-sag-ila*, the temple of the god Marduk in Babylon. This view is contested by E. G. H. KRAELING, in *J.A.O.S.* XL, 1920, pp. 276–281, who identifies it rather with the temple-tower of Borsippa, anciently called *E-ur-imin-an-ki*, and now known as Birs Ninrud. His reasons are that this tower is described as unfinished by the J document in *Genesis*, which indicates that the story originated in the eleventh century B.C. Now there is no evidence that the tower of Babylon was unfinished at this period, while there is evidence from a boundary stone of Merodach Baladan I (1201–1150 B.C.) that at this time the tower of Borsippa had only four stages. Moreover, in the 137th fable of Hyginus it is said that Mercury multiplied languages and divided the nations. Mercury is Nabu, the god of Borsippa, and here the confusion of tongues, which *Genesis*, xi connects with the tower of Babel, is associated with the tower of Borsippa.

The Origin of the Kaunákēs.—In *J.R.A.S.* 1920, pp. 326–329, S. LANGDON shows that the Greek garment called *kaunákēs* is both in name and in form of Sumerian origin. The most ancient Sumerian statues are dressed in a woollen skirt so woven as to represent the locks of a sheep-fleece. This primitive garment ceased to be worn by the Sumerians themselves after the archaic period which ends with the dynasty of Akkad. Henceforth in pure Sumerian art we find the skirt worn only by deities. The Sumerian name was *gú-èn* or *gú-an-na*, which passed over into Semitic as *guannaku*, the original of the Greek *kaunákēs*. The Greek *kaunákēs* was imported from Asia, and Aristophanes mentions Sardis and Ecbatana as the principal centres of its manufacture.

A Royal Treasure at Nippur.—In *Mus. J.* XI, 1920, pp. 133–139 (fig.) L. L(EGRAIN) publishes a tablet from Nippur in the Museum of the University of Pennsylvania describing a royal treasure of 125 objects of gold and precious stones stored at a place known as Ardi-Belit. The tablet dates from the fifth year of Nazimaruttash, ca. 1300 B.C.

A Sumerian Code of Laws.—In *Mus. J.* XI, 1920, pp. 130–132, V. S(CHEIL) translates three Sumerian tablets in the Museum of the University of Pennsylvania published by H. F. Lutz in *Selected Sumerian and Babylonian Texts* (see *A.J.A.* XXIII, 1919, p. 419). They are part of a code of laws which served as the source for the Code of Hammurabi. Three paragraphs have to do with land culture; two with buildings; two with slaves; two with the responsibility of hired men; and five with family affairs. Some of the sentences in Hammurabi's Code are servile translations into Babylonian of these Sumerian laws which are about a thousand years earlier.

The Sumerian Original of the Biblical Ellasar.—Ellasar in *Genesis*, xiv, 1 has been supposed to be identical with Larsa in Semitic Babylonian. The Sumerian name of this place is written *ZA-ra-ár*, but S. LANGDON shows in *J.R.A.S.* 1920, p. 515, that the phonetic value of *ZA* is *ila*, so that the name should be read *Ilarar*. By dissimilation of the *r* this became *Ilasar*. The Biblical form of the name in *Genesis*, xiv, 1 is based directly upon the Sumerian rather than upon the later Babylonian form of the name, which proves the antiquity of *Genesis*, xiv.

The Kings of Genesis xiv.—In *Z. Alttest. Wiss.* XXXVI, 1916, pp. 65–73, F. M. T. BÖHL, rejects the identification of Amraphel with Hammurabi, of Arioch with Rim-Sin (Eri-Aku?) and of Ellasar with Larsa, and attempts an entirely new chronological location of the chapter. Tid'al, King of Nations, in *Genesis*, xiv he identifies with Tudhālia, the sixth of the great Hittite kings, who was contemporary with Rameses II about 1250 B.C. Amraphel is not king of Babylon in *Genesis*, xiv but of Shin'ar, which is the same as Shanhar in the Amarna letters. This was the name of the old empire of Mitanni which once stretched far enough to include Babylon, but was not identical with Babylonia. The name Arioch occurs also in *Dan.* ii, 14 f. and *Judith*, i, 6, which suggests Persian affiliations. This recalls the fact that the Mitanni people, according to the documents discovered at Boghazkeui, worshiped the Aryan gods Mithra, Indra, and Varuna. Chedor-La'omer is a good Elamite name, Kudur-Laghamar, but he is not known as a contemporary of Hammurabi, and may well have been a predecessor of Shutruk-Nahunt I and his son Kudur-Nahunt II who brought the Kassite dynasty of Babylon to an end. He would then have lived about 1250 B.C. and have been a contemporary of Tid'al, King of Nations. According to this construction, all the characters in *Genesis*, xiv lived about 1250 B.C., and this is a more natural time to look for Abram, the Hebrew, than in the time of Hammurabi, 2100 B.C.

The So-Called Chedorlaomer Texts.—In *Orientalistische Studien Fritz Hommel Gewidmet* (*Mitt. Vorderas. Ges.* XXI, 1916, pp. 69–97) A. JEREMIAS subjects the so-called Chedorlaomer Texts of the British Museum to a fresh examination and publishes the texts in transcription and translation. The tablet dates at the earliest from the twelfth century B.C. on account of its mention of the *Umanmanda*, or Indo-Europeans, but it describes an ancient invasion of Babylonia by the Elamites. The name Tudhālia certainly occurs in the text, and is the equivalent of Tid'al, one of the Eastern kings in *Genesis*, xiv. If Arad-Eaku can be read Eri-e-a-ku, then this equals Arioch of *Genesis*, xiv. The name written ideographically *KU-KU-KU-KU-MAL-KU* cannot be read Kudur-Laghamar, *i.e.*, Kedor-la'omer, but is to be read Kudur-Nahunte. This was the name of a famous Elamite conqueror who ravaged Babylonia 2285 B.C. He would not correspond with the era to which Abram is assigned by Hebrew tradition. It is possible, however, that his name is a mistake for Kudur-Laghamar, which is a perfectly good Elamite name.

A Specimen of Babylonian Wisdom Literature.—Two fragments of a Babylonian philosophical dialogue have been published by Ebeling and by Reisner, and now some new fragments of the text have come to light which have led E. EBELING to publish a new transcription and translation of the document in *Mitt. Vorderas. Ges.* XXIII, 1918, pp. 50–70. In its critical and pessimistic outlook on life the Babylonian dialogue offers a parallel to *Ecclesiastes*. The Babylonian author, like the Hebrew, tries various kinds of activities and finds that none of them brings happiness. Like *Ecclesiastes* he advises us to be neither righteous nor wicked for there are disadvantages as well as advantages attendant on righteousness and the same is true of wickedness. His final conclusion is the same as that of *Ecclesiastes*, "Vanity of vanities, all is vanity," and the day of death is better than the day of birth. The text is discussed also by G. B. GRAY in *Exp. Times*, XXXI, 1920, pp. 440–443.

SYRIA AND PALESTINE

Prehistoric Palestine.—In *Mitt. Anth. Ges.* XXXIV, 1914, pp. 81–135 (24 figs.) A. KOHN gives a comprehensive *résumé* of the prehistoric periods of Palestine, from the Eolithic to the Iron Age, including descriptions of characteristic implements, pottery, dwellings, graves, etc.; also a bibliography and charts illustrating the relations of Palestinian civilization in its successive periods to contemporary periods of other Mediterranean civilizations. Palestine has never been the centre of original cultural development, but has been subject to successive waves of foreign influence. The backwardness of Palestine in these early periods is due to its geographical isolation.

Hebrew Uses of Fire.—In *Mitt. Anth. Ges.* XLIV, 1914, pp. 136–151 (4 figs.) A. DACHLER discusses the use of fire among the Hebrews, basing his conclusions for the most part on the Old Testament and the Talmud. Sacred fires, sacrifices, methods of cooking and illumination, furnaces, smithies, and potteries are considered.

A Hittite Settlement in Jerusalem.—*Ezek.* xvi, 3 says of Jerusalem: "Thy father was an Amorite and thy mother a Hittite." *Gen.* x, 15–17 makes Jebus (Jerusalem) a "brother" of Heth. Uriah the Hittite who lived at Jerusalem in the time of David (*II Sam.* xi, 3) has a name ending in *ia* like Ushpia, Kikia, Gilia, and other Hittite names. In view of these facts A. JIRKU, in *Z. D. Pal.* V. XLIII, 1920, pp. 58–61, subjects the letters from Jerusalem found at Tell el-Amarna to a new examination in order to find traces of Hittite influence. The name of the King of Jerusalem, Abdi-Hiba, is compounded with the name of a Hittite goddess, and in his letters he uses the formula "land of the city of N. N." which does not occur in the other Amarna letters but is the regular usage of the Hittite tablets of Boghazkeui. These facts indicate that Abdi-Hiba himself was a Hittite; and, according to one of his letters, he was born in Jerusalem, so that a Hittite occupation of the city for a considerable period is assured.

Necessity of Excavations at Jerusalem.—In *R. Hist. Rel.* LXXIX, 1919, pp. 319–326, RENÉ DUSSAUD calls attention to the urgent necessity of excavation on the site of the Temple at Jerusalem. Architectural restorations of the temple have hitherto been based on the dimensions given by the prophet Ezekiel, which are of less value than those recorded in *I Kings*. The literary data should be tested by examination of the actual site, and some architectural details of great interest might be recovered. The excavation could be carried on without disturbing the Mohammedan cult.

A Synagogue of the Period of Herod.—A Greek inscription discovered on the Hill of Ophel in Jerusalem in 1914 is published with full commentary by C. CLERMONT-GANNEAU in *Syria*, I, 1920, pp. 190–197 (pl.) It records the erection of a synagogue together with a hostelry for the entertainment of strangers by Theodotus, son of Vettienus, priest and archisynagogus. The inscription must be dated before the destruction of the city by Titus, and the synagogue was possibly the synagogue of the Libertini, mentioned in the *Acts of the Apostles*, vi, 9. The dedicator may have been a son or grandson of one of the Jews who were taken to Rome as captives by Pompey. The name Vettienus suggests that Theodotus' father, probably a freedman, had taken a Roman name derived from that of his former proprietor, Vettius. It is interesting to recall that a certain Vettienus is mentioned in Cicero's Letters as a

successful and intelligent *argentarius*. It may have been his son who used a part of his inherited wealth to provide for the comfort of other expatriated Jews who visited Jerusalem at the time of the Passover.

The "Holy Place" of 'Ain Dûk.—Towards the middle of September, 1918, a Turkish shell fired from a battery at El-Ghôranyeh against the British trenches at 'Ain Dûk, northwest of Jericho, laid bare part of an inscribed mosaic (see *A.J.A.* XXIV, 1920, p. 175) which, as the inscription itself testified, was part of an old Jewish "holy place." The inscription reads: "Honored be the memory of Benjamin the Manager, son of Josah. Honored be the memory of everyone who exerts himself and gave or shall give (?) in this holy place, gold or silver, or any valuable. . . . In this holy place. Amen." "Holy place" was a term used by the Essenes, and it is known that the Essenes lived in precisely these parts around the mouth of the Jordan and the Dead Sea. Further there are indications of animal and human representations, and the *motifs* recall Galilean rather than Jewish usage. It is possible, therefore, that Dûk lay outside the border of orthodox Jewish usage. The ancient name of the place was Dagon. The discovery is discussed by H. VINCENT, *B. Bibl.* XVI, 1919, pp. 532-563; S. A. COOK, *Pal. Ex. Fund*, LII, 1920, pp. 82-87; A. MARMORSTEIN, *ibid.* pp. 139-141; C. C. TORREY, *J.A.O.S.* XL, 1920, pp. 141-142.

The Habiru and the Hebrews.—In *Exp. Times*, XXXI, 1920, pp. 324-329, S. LANGDON summarizes all the evidence at present available as to the identity of the Habiru who are described in the Amarna letters as invading Palestine about 1400 B.C. He shows that the identity of the Habiru with the people written ideographically *SA-GAZ* is certain from the identification of gods of the Habiru and gods of the *SA-GAZ* in the tablets discovered by Winckler at Boghazkeui. This shows that the Habiru were a race, and the name itself is properly a gentile form. All the latest evidence goes to show that the Habiru are to be identified with the Hebrews in the wider sense, *i.e.*, not merely Israel, but also the kindred peoples whom the Old Testament classifies as children of Eber.

Yahweh in the Mesha Inscription.—In line 18 of the so-called Moabite Stone, or Inscription of Mesha, King of Moab, the following consonants occur: *W'QH MShM' . . LY YHWH*. The lacuna is usually supplied from line 12 so as to read *'R'L*, and the line is translated, "I took from thence the altar-hearths of Yahweh." In *J.R.A.S.* 1920, pp. 175-184 A. COWLEY suggests instead the restoration *'ShR LY*, and translates, "I took from thence that which should be for me." He shows that it is probable that *'R'L* means only "mighty man," as in line 12, so that the translation "altar-hearth" is inadmissible in line 18. In this case all early epigraphic evidence for the writing of the divine name as *YHWH* disappears. Everything seems to show that the early, or at least pre-exilic form of the name was *Yāw*.

A Samaritan Periapt.—In *J.R.A.S.* 1920, pp. 343-346 (2 figs.), E. J. PILCHER describes a small amulet which is remarkable as being the first known example of a bilingual in Greek and Samaritan. On the obverse it bears the inscription in Samaritan, "None like the God of Jeshurun"; on the reverse, in Greek, "One God, help thou Marciane."

A Maker of Phoenician Glass.—In *Syria*, I, 1920, pp. 230-234 (4 figs.), RENÉ DUSSAUD describes a glass cup found at Sidon, and now in the British

Museum. It is signed by the maker, Jason. The provenance confirms the importance of Sidon as a centre of glass manufacture. M. Dussaud also calls attention to two skilfully modelled glass fish, which were discovered at Tyre and are now in the Louvre. They were intended as ornaments on glass vases, and cups actually ornamented with similar fishes have been found in Rome and at Trier. These were undoubtedly imported from Phoenicia.

Ancient Architecture in Syria.—With the issue of the sixth part of his *Ancient Architecture in Syria*, Section B, dealing with the ruins of the Djebel Sim'ân Professor HOWARD CROSBY BUTLER has completed the publication of the discoveries made in Northern Syria by the Princeton Expedition in 1904-1905. As in the earlier volumes numerous photographs and plans of ruined churches and other buildings are reproduced, as well as drawings showing elevations and various architectural details. The sites discussed are Dêr Sim'ân (Telanissus), Kal'at Sim'ân, Takleh, Basufân, Kefr Lâb, Burdj Hêdar, Kafr Nabo, Brâd (Barade), Burdj il-Kâs, Kalôta, Kal'at Kalôta, Kharâb Shems, Zûk il-Kebîr, Banastûr, Bashamra, Surkanya, Fafirtîn, Burdjkeh, Bazîhir, Batûta, Kharab il-Mesh-hed, Kefr Antîn, Simkhâr, Shêkh Slemân and Mshabbak. [*Ancient Architecture in Syria*, Section B, *Northern Syria*, Pt. 6 *Djebel Sim'an*. By HOWARD CROSBY BUTLER. Pp. 261-359; pls. 23-26; figs. 279-391. Leyden, 1920, Late E. J. Brill. 4to.]

A Statuette of Zeus Dolichenus.—In *Syria*, I, 1920, pp. 183-189 (pl.; 2 figs.) FRANZ CUMONT discusses a marble statuette of Zeus Dolichenus said to have been discovered in Syria, not far from the site of Doliche. The provenance is interesting, for few memorials of this Syrian cult, which was widely disseminated in the Roman empire, have been found in the country of its origin. The marble, which is of inferior workmanship, represents the god in a Phrygian cap, but with the cuirass and *paludamentum* of a Roman soldier. He stands on the back of a bull. An altar behind the bull gives the group mechanical stability. It is inscribed as a dedication of Crispus and Silvanus. Its Syrian provenance proves that the type of Zeus Dolichenus which shows him in the guise of a Roman warrior is not of occidental origin. In an earlier period his dress was in imitation of that of Eastern kings; in the Roman age the costume of the Roman emperor was imitated. Probably the marble group is a copy of one of bronze which stood in the temple at Doliche. Another type of this god, exemplified in a statue found at Carnuntum on the Danube, shows him somewhat less grotesquely, with one foot on the neck of a couchant bull. A goddess whose cult was associated with that of Zeus Dolichenus, known in Latin inscriptions as Juno Regia, is regularly represented as standing on the back of a cow, hind, or lioness. An interesting example of this type was found at the camp of Cilurnum (Chesters) in Northumberland. Zeus Dolichenus has close affinities with the Iranian god Ahoura-Mazda, and his worship was associated with the Mithraic cult. Further light on the relation of Syrian and Iranian cults may be expected from excavations in Syria.

Coins of Mazaeus.—In *A. J. Num.* LIII, Pt. VI, 1919, pp. 1-42 (2 pls.) E. T. NEWELL attributes two series of coins of Mazaeus, Satrap of Syria and Cilicia, to a mint at Mydriandrus. They have usually been assigned to that of Tarsus.

Coinage of the Seleucids.—In *A. J. Num.* LI, 1917, pp. 1-151 (13 pls.) is an elaborate article by E. T. NEWELL on The Seleucid Mint of Antioch. Al-

though hampered by his inability to secure casts of coins in Europe because of the war Mr. Newell believes that he has been able to give "a more or less clear outline of the issues [of the mint at Antioch] as a whole, to show their real sequence, and to throw in relief the comparative importance of this coinage and the light it sheds on the history of the times." He begins with Seleucus VI, 246-226 B.C. and closes with Antiochus XIII, *ca.* 65 B.C., dealing fully with gold and silver issues, incidentally with bronze coins.

ASIA MINOR

The Hittite Language of Boghazkeui.—In *J.R.A.S.* 1920, pp. 49-83, A. H. SAYCE subjects the recent publications of Professor Hrozný of Vienna to a searching criticism. He holds that Hrozný's assignment of Hittite to the Indo-European group of languages is hasty, and is not warranted by the phenomena of the language so far discovered. The main evidences alleged are *wâdar*, "water" with its genitive *wedenas*, participles in *-nt*, *kuis* "who" and *kuid* "what," *ug* "ego," *ammug* = $\xi\mu\omicron\iota-\gamma\epsilon$, *zig* "thou," *iya-mi* "I make," *iya-si* "thou makest," *iya-(n)zi* "he makes," *iya-weni* "we make," *iya-teni* "ye make," *iya-(n)zi* "they make." *Wâdar* does mean "water," but it has no connection with the Indo-European root since the syllable *dar* is used to form abstracts and is not part of the root. The genitive *wedenas* cannot be connected with $\tilde{\upsilon}\delta\omega\rho$ and the two etymologies are mutually exclusive since $\tilde{\upsilon}\delta\omega\rho$ and *watan* belong to different families of the Indo-European languages. *Kuis* "who" and *kuid* "what" are temptingly like Latin *quis* and *quid*, especially when we find *kuis-ki* and *kuid-ki* "whoever," "whatever," but these words occur also in Lydian, and they do not conform to Indo-European syntax. They precede the words to which they refer, they head sentences without antecedents, and they are used adverbially. *Ug* is not *ego* because the first vowel is long, and because *g* is a demonstrative element which we find also in *ammug* "mine." *Ammug* is used as a nominative and, therefore, cannot be equated with $\xi\mu\omicron\iota-\gamma\epsilon$. The verbal forms are like Indo-European, but they are not peculiar to this group of languages; they are found also in Vannic and in Sumerian. The best plan is to keep clear of all philological theories for the present, to translate the Hittite texts on the basis of their Babylonian equivalents, and to leave the problem of the affiliations of the language an open question until its decipherment is more complete. If this is not done there is danger that false etymologies may lead to incorrect translations.

The Scapegoat Among the Hittites.—In *Exp. Times*, XXXIII, 1920, pp. 283-284, A. H. SAYCE publishes a Hittite text containing a ritual law very similar in contents to the law of the scapegoat in Israel. The text reads as follows: "(The priest) brings a lamb: he strings together a lapis-lazuli stone, a *shoham*-stone, a green stone, a black stone, and a white stone: he makes these stones like a collar; then he ties (them) round the neck of the lamb; then he drives forth the lamb to a foreign country, and repeats to it the following: 'Whatever foreigner thou art who actest according to the will of the god, thus we bring to thee with its neck tied this lamb as a scapegoat for the god and afterwards observe a feast,' and with this ritual (?) he fastens the sin upon the lamb, and it is recited for whatever god acts according to (his) will."

An Egypto-Carian Bilingual.—The Nicholson Museum of the University of Sidney, Australia, contains a stele with a funerary relief and an inscription both in Egyptian and in Carian. This is published for the first time in photograph and correct transcription by A. ROWE in *J.R.A.S.* 1920, pp. 85-95 (plate). The inscription reads as follows: \bar{A} -V-E-TH-O M-A-V-N-A-F-F-KH-E \bar{O} -D O-V-Y-Z-KH-E; that is, "Af-thoth (?), the Memphite and Ephesian (?).

Coins of Characene.—After having for a long time (125 B.C.-113 A.D.) issued coins with Greek inscriptions, the dynasts of Characene followed the example of their Arsacid suzerains and their Elymaic neighbors in introducing the vernacular on their coins. Some of these legends are discussed by J. DE MORGAN in *Num. Chron.* 1920, pp. 122-140 (4 cuts). G. F. HILL appends a few notes.

Coins of Perinthus.—In *R. Belge Num.* LXXII, 1920, pp. 105-109, VICTOR TOURNEUR describes (1) two medallions of Perinthus, one of the time of Gordian (now in the Royal Library of Belgium), the other of the time of Alexander Severus (now in the British Museum) which by reason of their full representation of the attributes of Zeus—the twelve signs of the zodiac on the medallion of Gordian, the sun and moon, earth and sea on that of Alexander Severus—permit the inference that it was Zeus, the lord of the world, who was worshipped at Perinthus; (2) various coins of Perinthus which together represent nearly all the labors of Heracles and show how important his cult was, certainly as early as the time of Domitian, so that the passage in Ptolemy (III, 11, 16), which attests the surname "Heracleian" for the city at a period much earlier than the fourth century A.D. should not be suspected of being a late interpolation.

Coins of Sinope.—In *A. J. Num.* LII, 1918, pp. 117-127 (2 pls.) E. T. NEWELL discusses the Alexander coinage of Sinope and argues against L. Müller, who assigned the issues in question to Sidon, that they were struck in a mint at Sinope.

Coins of Tarsus.—In *A. J. Num.* LII, 1918, pp. 69-115 (8 pls.) E. T. NEWELL studies the coinage of Tarsus under Alexander and the satraps who immediately preceded his conquest.

An Inscription at Ereruk.—In *C. R. Acad. Insc.* 1920, pp. 215-218, C. DIEHL corrects Strzygowski's reading of an inscription from the south side of the basilica at Ereruk, near Ani in Armenia, published in Strzygowski's *Die Baukunst der Armenier und Europa*, Vol. I, p. 31.

GREECE

SCULPTURE

The Ludovisi and Boston Reliefs.—In *J.H.S.* XL, 1920, pp. 111-123 (pl.) G. M. A. RICHTER gives briefly the present state of the discussion on the subject of the Ludovisi and Boston reliefs, referring chiefly to Studniczka's and Caskey's articles (*Jb. Arch. I.* 1911, 50 ff.; *A.J.A.* 1918, 118 ff.) and puts forward a new interpretation: That the two reliefs, belonging to a monument in honor of Aphrodite, represent, like the two pediments of the Parthenon in

honor of Athena, one the birth of the goddess and the other the most significant manifestation of her power; *i.e.* the Boston relief depicts the goddess, through her son and representative Eros, as granting and withholding the blessing of sons, upon which the continued existence of a family depends; hence the contrasted emotions of joy and grief expressed by the two women. The four figures at the corners represent different classes of votaries. Klein's and E. A. Gardner's theory of forgery is dismissed as false on artistic and psychological grounds. The representation of water in the Ludovisi relief and the differences of measurement are also touched upon.

A Bronze of Fifth Century Type.—In *Ausonia*, IX, 1919, pp. 87-92 (pl.) A. MINTO discusses a bronze statuette, discovered at Montegabbiano near Orvieto, and now in the Archaeological Museum of Florence (Fig. 4). It represents a young woman, wearing a Doric chiton with apoxygma. The head is inclined to the right and the lost right arm probably held a patera. The dress shows a more free and natural treatment of folds than is usual in Doric drapery of the fifth century, and it appears that the prototype of the statuette was a work which, though preserving much of the form of fifth century sculptures, manifested in detail some tendencies to the style of a later period.

Praxias.—In a study published in *Memoirs of the American Academy in Rome*, III, 1919, pp. 91-100 (4 pls.)

E. DOUGLAS VAN BUREN adopts Homolle's theory that Callimachus and not Calamis

was the master of Praxias, the sculptor of the pediments of the fourth century temple at Delphi (Paus. X, 19, 3). The work of Callimachus and his school was the *répertoire* from which the sculptors of the neo-Attic school derived their types. The neo-Attic reliefs which represent Apollo, followed by Leto and Artemis, receiving a libation from a winged Nike beside a small altar, are probably imitative of figures in the east pediment of the temple at Delphi. The plane tree and the Corinthian temple in the background of two of these reliefs show that the composition is associated with Delphi. The figures are from one side of the pediment group; the other side of the gable was occupied by the Muses. It is further conjectured that the orgiastic Dionysiac figures found in some neo-Attic reliefs in what seems incongruous juxtaposition with archaistic types, are derived from the west pediment of the Delphi temple. In this were represented Dionysus



FIGURE 4.—BRONZE STATUETTE: FLORENCE.

and the Thyiads. The composition was completed after the death of Praxias by Androsthenes, a contemporary of Scopas who may have been under his influence. He may, therefore, have introduced among the traditional figures of the school of Callimachus some which showed Scopaeic traits.

The Apotheosis of Homer.—In *Röm. Mitt.* XXXII, 1917, pp. 74–89, J. SIEVEKING argues that the relief representing the apotheosis of Homer is not based on a similar group of statues in the round, though many of the individual Muses go back to types of statues and Tanagra figurines. The grouping shows the influence of painting. The date of the relief is about 150 B.C.



FIGURE 5.—DIONYSUS AND SATYR: VENICE.

Groups of Dionysus and a Satyr.—The groups of Graeco-Roman date which represent a more or less intoxicated Dionysus accompanied by a young satyr are the subject of a study by ALDA LEVI in *Ausonia*, IX, 1919, pp. 53–64 (pl.; 2 figs.). A group of this type in the Museo Archeologico of Venice, distinguished by the harmony of its composition, is Praxitelean in its lines, while its expressiveness is suggestive of Scopas (Fig. 5). It is compared with similar groups in the Museo Chiaromonti and in Alexandria. In a number of other similar groups the figures are modified in the direction of Hellenistic taste, the Dionysus becoming more grossly in-

toxicated, the satyr more animal. The transformation of the satyr type indicates that the original could not have been the famous satyr of the group by Praxiteles described by Pliny (*N.H.* XXXIV, 69), since later artists would hardly have ventured to take liberties with a type so celebrated.

Iconographic Miscellanies.—In *Röm. Mitt.* XXXII, 1917, pp. 118–146 (pl.), M. BIEBER discusses the busts of Socrates. The pseudo-Seneca, according to her, really represents Aristophanes. The relief found in the olive orchard of the Cephissus plain in 1840 (Conze, *Att. Grabrel.* IV, pp. 8 ff.) represents an oil merchant and his family and is to be dated in the first century B.C.

VASES AND PAINTING

Plastic Vases.—A vase in Munich, a red-figured cup supported by a plastic group representing a negro boy seized by a crocodile, is the occasion of a detailed study of Greek plastic vases by E. BUSCHOR in *Mün. Jb. Bild. K.* XI, 1919, pp. 1-43 (4 pls.; 60 figs.). The type exemplified by the cup in Munich and by one in Boston is of fifth century origin, the plastic group showing an effective and well unified composition mainly in one plane. A well-defined variant of this type appears in several fourth century vases of Italian origin, in which the group is more complicated but less dramatic than in the earlier type. Hellenistic art develops a radical reconstruction of the motive, with characteristic tridimensional composition: one of the negro's feet is caught in the jaws of the crocodile, and the crocodile's tail encircles the negro's neck. The whole class of plastic vases, seemingly so alien to the spirit of Greek art, has its origin in a group of small plastic lecythi of the seventh century, the forms of which were derived from an Egyptian or oriental source. The finest of the small plastic lecythi are of Proto-Corinthian style. Plastic forms make their appearance in Attic pottery after 540 B.C., and are continued in the fifth century in a series of oenochoe in the shape of female heads. In the sixth century cups of plastic form began also to be manufactured: sometimes with one handle, *e.g.*, a fine negro head in Boston, but more often an adaptation of the cantharus shape. Animal as well as human heads early find a place in the *répertoire* of the plastic artist: the mule's head and ram's head in Boston, shaped as one-handled cups, are examples. Many novel plastic types appear in the fifth century; and the crocodile group of the Munich and Boston vases is to be attributed to the pottery of Sotades, who experimented in plastic forms. The fine Sphinx cup and the astragalus of the British Museum are also works of Sotades. The name rhyton frequently given to these elaborate plastic cups is improperly applied. The rhyton was a cup in the shape of a horn, with an orifice at the lower end. It sometimes had plastic ornament, but is not to be confused with the type to which the crocodile vases belong. A study of the representation of negroes in vase-painting as well as in plastic form shows that the Ionians were the intermediaries in the transference of this type from Egypt to Athenian art.

A Marriage Procession on a Red-figured Crater.—In *Ausonia*, IX, 1919, pp. 65-75 (pl.; 3 figs.) ANTONIO MINTO discusses a severe red-figured fragment in the Museo Archeologico of Florence, showing a bride conducted by the bridegroom and followed by a young woman carrying a vase and a box; a boy holding a patera; and a woman with two torches. The objects carried by the young women and the boy have reference to ceremonies on the reception of the bride at her husband's house. The vase is attributed to Hieron (Macron) or an imitator.

The Jason Vase from Cerveteri.—In *Rend. Acc. Lincei*, XXIX, 1920, pp. 52-64 (3 figs.) PERICLE DUCATI discusses a well-known red-figured vase-painting, in the severe style, depicting an Argonautic scene, unknown to us through literary tradition, where Jason is either being devoured by the monster that guarded the golden fleece or is being vomited forth by it. Athena, standing by, takes the place of Medea in this form of the story. The attitude of Athena as a deeply interested observer and the collation of a Felsinean cyathus

on the handle of which a youthful figure is represented as issuing from a serpent's mouth lead the author to the latter of these two interpretations. C. Robert's theory, based on a fragment of the *Hypsipyle* of Euripides, that the vase represents Jason in the act of being devoured and slain by the dragon is refuted, so Ducati thinks, by the passive attitude of Jason and the seeming indifference of Athena to the hero's fate. The vase is placed by Hoppin in his *Handbook of Attic Red-figured Vases* (I, p. 289 No. 102) among the works of Duris. It was first fully treated by Gerhard and Welcker, and has often been reproduced (Panofka, Baumeister, Roscher, Reinach, etc.)

Theon.—In *Röm. Mitt.* XXXII, 1917, pp. 173–199 (pl.), J. Six discusses the art of Theon and adds several paintings extant in replicas to his series on the Iliad.

INSCRIPTIONS

Metrical Inscriptions from Crete.—In *Rend. Acc. Lincei*, XXVIII, 1919, pp. 308–317, DORO LEVI discusses thirty-seven metrical inscriptions from Crete (chiefly hexameters or pentameters), in connection with Wilhelm Meyer's rules as to the coincidence of the ends of words of particular metrical value with definite places in the line, especially the caesurae in the third and fifth feet (see *Sitz. Mün. Akad.* 1884, p. 979). In a later article (pp. 343–354) Levi discusses the more general application of these laws to pre-Alexandrine and post-Alexandrine literature, and gives a list of the Cretan inscriptions cited by him in his first article.

GENERAL AND MISCELLANEOUS

The Phaestus Disk.—In *Transactions and Proceedings of the Royal Society of South Australia*, XLIII, 1919, pp. 142–152 (7 pls.) A. ROWE renews the discussion of the Phaestus disk. A comparison of the characters on the disk with the syllabic signs of the Late Cypriote script leads the author to conjecture that the disk is of Cypriote origin and belongs to the period of Assyrian domination (the seventh century B.C.). A combination of characters which he interprets as signifying "chief of the shield" occurs in combination with ten different words on the disk; and it is conjectured that these are the names of ten Cypriote princes, possibly identical with the ten whose homage to Esarhaddon is recorded in an Assyrian inscription. No complete reading of the disk is attempted, but the resemblance of many of its hieroglyphs to Cypriote characters is discussed in detail.

The Identification of Ithaca.—In *Harvard Studies in Classical Philology*, XXXI, 1920, pp. 125–166 (map) F. BREWSTER publishes a careful study of the evidence for the location of Ithaca, paying particular attention to the point of view of the seaman and working out his conclusions with the help of charts prepared for mariners. He finds that the traditional identification of Ithaca with Thiaki is correct. Arkudi is the ancient Asteris, and Port Frikes is Reithron. Leucas and Cephalonia are Same and Dulichium respectively. When Telemachus returned from Sparta he followed an old trade route and landed on the southern end of the island. The lines in the Odyssey which refer to Ithaca really fit actual conditions.

The Excavations at Delphi.—Mr. G. C. Richards has published a translation from the Danish of DR. FREDERIK POULSEN's work on Delphi. The book

gives a general account of the site, the oracle, the earliest objects found, the Treasury of the Sicyonians, Cleobis and Biton, the Naxian sphinx, the Treasury of the Siphnians, the Temple of Apollo and its pediments, the Treasury of the Athenians, the war monuments of Delphi, the votive offerings of the Sicilian princes, the Lesche of the Cnidians, the column of the dancing women, the monument of the Thessalian princes and the statue of Agias, the Greek portraits found in the excavations; and finally there is a chapter on the spirit of Delphi. The book is fully illustrated. [*Delphi*. By FREDERIK POULSEN. Translated by G. C. Richards, with a Preface by Percy Gardner. London, 1920, Gyldendal. 338 pp.; 164 figs. 4 to. 21 sh. net.]

A Bronze Deinos and Stand.—In *Dedalo*, I, 1921, pp. 153–161 (pl.; 8 figs.) C. ALBIZZATI describes a bronze *deinos* of about 500 B.C. with its tripod stand, found at Amandola, and now in the Museum at Ancona. The handles have the forms of a lion and a bull. The lion is almost exactly like a bronze lion in Boston, also originally the handle of a vase (*B. Mus. F. A.* VIII, 1910, pp. 49–50). The feet of the tripod represent dogs' feet. Between the legs are pairs of volutes, terminating in a palmette. The style of this ornament is comparable to bronzes from Olympia and from Locris. The *deinos* is a fine example of Ionic decorative art. The evidence is not sufficient to justify an attribution to any particular locality.

Dynamic Symmetry.—In *J. Brit. Archit.* XXVII, 1920, pp. 213–223, JAY HAMBIDGE discusses Greek design, and gives a detailed application of the principles of dynamic symmetry to the design of the Parthenon.

The Temple of Aphrodite Urania.—In *Ausonia*, IX, 1919, *Varietà*, cols. 13–16, B. PACE conjectures that the site of the temple of Aphrodite Urania in Athens, described by Pausanias as near the Hephaesteum (I, 14, 7) was on a rock projecting from the Nymphaeum Hill, opposite the Kolonos Agoraios, where the little church of Hagia Marina now stands. Sliding down a smooth surface of this rock is believed by Athenian women to be a remedy for sterility. This superstition seems a survival of the ancient cult.

The So-Called Phidias Papyrus.—In *Sitz. Berl. Akad.* 1914, pp. 806–811, CARL ROBERT subjects the so-called "Phidias papyrus" of Geneva (see *A.J.A.* XIV, 1910, p. 515) to renewed criticism. He is confirmed in the view that the fragments in question are not from an account of the traditional trial of Phidias. They are from a commentary on or epitome of an oration. The occurrence of the form *Νικοπολετης* shows that the date of the oration was later than the time of Alexander, who first gave the name Nicopolis to a city. While it is not absolutely impossible that the Phidias mentioned in the papyrus is the sculptor, it is more probable that it is neither the sculptor nor the *diaetetes* of 325 B.C., but a citizen of Nicopolis. The certain identification of the oration which is the subject of the papyrus is impossible; but the occurrence of the name Euthygenes recalls the fact that one of Deinarchus' works was an oration for Euthygenes.

The Origin of the Greek Minuscule Hand.—The earliest known example of Greek minuscule writing, which is the basis of present-day printed and written Greek letters, is the *Ūspensky Gospels*, a vellum manuscript dated A.D. 835 and written by one Nicolaus. Although this book, known by the name of its discoverer, was found in Jerusalem, internal evidence shows that it was written at Constantinople, by Nicolaus, the second of the name who became abbot of

the famous Studium monastery there. In this house, which was founded in 462-3 by a Roman consular named Studius, the copying of manuscripts was an important industry from the first, and in particular two of the abbots who directly preceded Nicolaus were noted for their voluminous and rapid writing. This must mean that they used the ligatured minuscule hand as distinguished from the earlier, more formal and laborious uncial; hence the use of this style of writing, which appears fully developed as from long practice, in 835, may be inferred at least as far back as the first half of the eighth century. It is not, however, derived from the sprawling papyrus cursive of documents of that time; neither is it directly related to the uncial; its origin must rather be conjectured in some earlier form of cursive. The motive for its invention may be found in the cutting off of the supply of cheap papyrus from Egypt by the Arabian conquest in the seventh century, which necessitated the use of the more expensive parchment and vellum, whence the book-form in place of the roll, and the use of both sides of the sheet, as well as the more compact form of writing. (T. W. ALLEN, *J.H.S.* XL, 1920, pp. 1-12; 3 pls.)

Greek Archaeology, 1869-1919.—A summary of the results of fifty years of archaeological research in Greece in their relations to philological studies, which was read by H. N. FOWLER at the joint meeting of the Archaeological Institute of America and the American Philological Association at Pittsburgh in 1919, is published in *Cl. Journ.* XVI, 1920, pp. 93-102.

ITALY

ARCHITECTURE

Domitian's Villa in the Alban Hills.—In *B. Com. Rom.* XLVI, 1918, pp. 1-68 (3 pls.), G. LUGLI continues his description of the villa of Domitian. He discusses the very unsatisfactory remains of the central structure, the palace proper. Among the better preserved are several *piscinae*, *thermae*, *nymphaea*, a *quadriporticus*, a theatre with fragments of a fine stucco frieze, a wonderful *cryptoporticus*, a hippodrome, etc.

The Sanctuary Ad Spem Veterem.—In *B. Com. Rom.* XLVI, 1918, pp. 69-84, R. LANCIANI takes up again the question of the subterranean sanctuary Ad Spem Veterem and comes to the following conclusions: (1) It has nothing to do with the *columbarium* of the Statilii Touri; (2) It belongs to Hadrian's time; (3) It is to be grouped with the subterranean and semi-subterranean chambers devoted to foreign rites common in imperial times, such as the basilica Crepereia, the basilica Hilariana, the basilica of Junius Bassus, etc.; (4) the divinity to whom it was dedicated can not be identified.

The Temples Near S. Nicolo a Cesarini.—In *B. Com. Rom.* XLVI, 1918, pp. 115-160 (pl.), G. MARCHETTI-LONGHI discusses a group of temples in the campus Martius. The *templum Bellonae* is located by him opposite the west end of the Circus Flaminius, in the Piazza Paganica. The remains of the round temple known as that of Hercules Invictus are identical in construction and contemporaneous with the remains of the rectangular structure under the church. They are to be identified as the temples of Juno Regina and of Diana, erected by Aemilius Lepidus, 179 B.C. Directly south of these sanctuaries

was that of Fortuna Equestris. The three buildings were bound into a group by a porticus, probably the Corinthia or Octavia. The whole complex is shown on fragments 140 and 110 of the *Forma Urbis*, the reconstruction of which Marchetti-Longhi alters somewhat, basing his changes on some recently discovered foundations in the Via S. Nicolo a Cesarini.

SCULPTURE

Etruscan Sculpture.—In *Dedalo*, I, 1921, pp. 559–574 (pl.; 11 figs.) ALESSANDRO DELLA SETA discusses the qualities of ancient Etruscan art, as exemplified in two terra-cotta Gorgoneia, the terra-cotta sculptures of Veii, the bronze Chimera of Florence, the Wolf of the Capitoline and a few other works of sculpture. He finds a tendency to exaggeration of expression and an emphasis on *corporeità* characteristic of Etruscan style.

A Great Etruscan Sculptor.—It has been conjectured by some critics that Pliny's statement concerning the calling of Vulca, a sculptor of Veii, to Rome to make for the temple of Jupiter a polychrome terra-cotta statue of the god is based only on legend, that large Etruscan terra-cotta sculptures in the round so early as this did not exist, and that the Capitoline temple is really two centuries later. But now the excavation (in 1916) of pieces of life-size sculptures in Vulca's native city confirms the early date of the Etruscan development of this art and even points strongly to that famous sculptor as the author of the finds. The fragments belong to a free standing group representing the contest of Apollo and Hercules over a hind in the presence of two divinities, one of whom is Mercury (cf. *A.J.A.* XXIII, 1919, pp. 300 ff.). The figure of Apollo is very largely preserved. The style of the work places it clearly in the series of Etrusco-Italian works of the end of the sixth century, with the nearest parallels, outside of Italy, in Ionic work, such as the sculptures of the treasury of the Siphnians at Delphi. (G. O. GIGLIOLI, *Rass. d'Arte*, VII, 1920, pp. 33–42; pl.; 10 figs.; and *Emporium*, LI, 1920, pp. 59–69; 24 figs.)

The Walking Apollo.—In *Boll. Arte*, XIV, 1920, pp. 73–83 (12 figs.) C. ANTI compares the Apollo of Veii with other ancient sculptures exhibiting similar motives of movement. It is shown that the Apollo, while pleasing from all sides, was made with the frontal view as the principal one, while the Hermes of the same group was to be seen from the side. The two were apparently made by different artists. Closest relationships to the Apollo are exhibited by the Naples Artemis from Pompeii and the statue of a woman in the Syracuse museum. Both of the latter are Sicilian work, and their similarity to the Veii sculpture helps to prove a radiation of Sicilian influence upon Etruscan work. The point of contact was, of course, Rome, where both Etruscan and Sicilian artists worked in the early fifth century B.C.; political reasons prohibited the access of Etruscans to Sicily itself.

The "Vertumnus" of Florence.—In *Rend. Acc. Lincei*, XXIX, 1920, pp. 65–75 (3 figs.) G. BENDINELLI undertakes to prove that the so-called Vertumnus of the Archaeological Museum of Florence, found in Isola di Fano in 1884 (*Not. Scav.* 1884, pp. 270–274) is a Hermes. Milani, who is responsible for the common interpretation, admits that Vertumnus was a sort of Etruscan Apollo and that the type is midway between the Apollos of Tenèa and Piombino, dating back, therefore, to the sixth century B.C. This would presuppose a school of

sculpture in Central Italy capable not only of imitating Greek works of art but of producing independent and original creations, for Milani argues that this statue shows no traces of Greek influence. There is, however, no basis in fact for any such assumption. Bendinelli, adducing parallels from Greek vase-paintings, finds in the wand, headdress and shoes of the statue convincing proof that, if the statue is a Vertumnus, it is a Vertumnus-Hermes and not a Vertumnus-Apollo. He dates it as far back as the time of Pisistratus, comparing its style with the female statues of the Acropolis and the Moschophoros of the same museum, but regarding its execution as an Etruscan imitation of Peloponnesian art, the Attic school of this early period being unfamiliar with bronze technique.

A Statuette of Vacuna.—In *Rend. Acc. Lincei*, XXIX, 1920, pp. 76-88 (fig.) GIOVANNI PANSA describes a bronze winged statuette from his own collection and identifies it as Vacuna, the epichoric goddess of the Sabines. The figure measures 14.5 cm. from tip of wing to the feet and holds in the right hand an apple or pomegranate. It was found in Sabine territory, in the Ager Reatinus, according to the statement of the finder. In proving its connection with Vacuna Pansa dwells upon the fact that this Sabine goddess, though sometimes identified by the ancients with Diana, Venus, Minerva, Bellona, Ceres, etc., was originally an agricultural divinity of the Bona Dea or Demeter type, especially identified with the soil and the defense of the soil as a goddess of victory. As to the etymology of the name he disagrees with the scholiasts to Horace, *Ep.* I, 10, 49 and with Ovid, *Fasti*, VI, 62, 307 who connect it with *vacare* and *vacuus* and, comparing the Latin goddess Vica Pota and the Etruscan divinity Fecu, thinks the root to be *vik* as in the words *pervicus*, *pervicax*, *vincere*, etc.

Some Roman Portraits.—In *Röm. Mitt.* XXXIII, 1918, pp. 1-30, GEORG LIPPOLD objects to Studniczka's identification of the so-called Pompeius with Menander; he argues that it represents Vergil. The pseudo-Seneca often united with this portrait may be Lucretius. The statuette reproduced in *Porträtstatuen*, pp. 86 f. represents Zeno of Citium the Stoic. Studniczka's "Sejanus" and "Agrippa Postumus" are identified as Cn. Domitius Ahenobarbus and his son of the same name, grandfather and father of the emperor Nero. The bust in Copenhagen which Studniczka calls Caligula is a Renaissance work. In *B. Com. Rom.* XLVI, 1918, pp. 169-183, TINA CAMPANILE discusses portrait heads in the Archaeological Museum in Florence, the portrait of an old man (Roman of the end of the Republic), Augustus, Tiberius, Vespasian.

The Julio-Claudian Family on the Ara Pacis.—In *Röm. Mitt.* XXXII, 1917, pp. 90-93, J. SIEVEKING makes the following identifications of figures on the Ara Pacis: Agrippa (veiled) leads the procession together with his son L. Caesar; the majestic figure preceding Tiberius is Livia; Julia with Agrippa Postumus goes before Drusus, who is followed by his wife, the younger Antonia, and their children Germanicus and Livilla. L. Domitius Ahenobarbus and the older Antonia follow them.

A Bust of Constantius Chlorus.—In *Mün. Jb. Bild. K.* XI, 1918, pp. 44-54 (12 figs.) JOHANNES SIEVEKING proposes a new identification of a bronze bust in the Munich Antiquarium which Furtwängler published as a portrait of Maximinus Thrax (*Ibid.* II, 1907, pp. 8 ff.). Four phases may be distinguished in the portraiture of the Imperial period: (1) from Augustus to Hadrian a style

which is under a predominant Greek influence; (2) from Antoninus Pius to Elagabalus, effort after totality of visual impression rather than plastic effect, with marked use of light and shade; (3) from Alexander Severus to Diocletian, continuation of the picturesque style, but simpler, and with deeper expressiveness, "the last real, and perhaps the most characteristic flowering of Roman portraiture"; (4) from Diocletian to and including the Byzantine period, mask-like rigidity and abstract expression, denoting the exaltation and remoteness of the Emperor. The portraits of Maximinus Thrax, in sculpture and on coins, are striking examples of the third phase. The portrait bust in Munich, on the other hand, is distinctly a product of the fourth phase. The head is as much an incarnation of the idea of Imperial exaltation as a representation of an individual. The peculiar rendering of the eyes is also a ground for assigning the work to this period; and on the same ground two bronze oenochoae in the form of a male head, one in Paris and one in Munich, are to be attributed to the same period. The band and the wreath on the Munich bust suggest that the subject is earlier than Constantine; and its resemblance to coin portraits of Constantius Chlorus, the father of Constantine, is sufficient to justify its identification as a portrait of this emperor.

Methods of the Roman Copyists.—In *Röm. Mitt.* XXXII, 1917, pp. 95–117, GEORG LIPPOLD calls attention to the freedom with which the hair, attributes, caps, bands, etc., of the original statues were reproduced by the copyists. Replicas of the same statue, therefore, often produce entirely different impressions.

Statues of the Muses.—In *Röm. Mitt.* XXXIII, 1918, pp. 64–102, GEORG LIPPOLD distinguishes five groups of statues of the Muses: the Vatican group of the end of the fourth century B.C.; the "Philiskos" group fifty years later; the Ambracian, contemporary with the latter; the prototype of part of the Halicarnassus base, dating from the end of the third century; and the Frankfurt group of the second century.

The Sarcophagus of Torre Nove.—In *Röm. Mitt.* XXXII, 1917, pp. 168–171, J. SIEVEKING argues that the relief in Florence which is so similar to the sculpture on the sarcophagus of Torre Nove is a Renaissance copy of an antique historical relief the original of which was also used as model for the sarcophagus. The marriage scene has nothing to do with Aeneas.

VASES AND PAINTING

The Tyro of Sophocles.—To the monuments (a Greek terra-cotta relief and some Etruscan mirrors) to which G. E. Rizzo has already called attention as illustrating the myth of Tyro, which formed the basis of Sophocles' lost tragedy, E. GALLI (*Boll. Arte*, XIV, 1920, pp. 17–35; 4 figs.) adds an Italian painted vase, evidently a mediocre copy of a Greek original of the end of the fifth century, B.C. It is an Apulian amphora and is now in the Museo Nazionale at Naples. The scene here depicted has always been interpreted as the meeting between Electra and Orestes, with Pylades, at the tomb of Agamemnon; but a careful study proves that it is an important passage from the story of Tyro; the moment represented is that in which the twins, Neleus and Pelias, appear before their mother at the well before the temple where she serves.

Ajax and Cassandra on a Tarentine Vase.—In *Röm. Mitt.* XXXIII, 1918, pp. 31–44 (pl.) CARL ROBERT publishes fragments of a Tarentine vase, giving what he considers the most beautiful of the later representations of the famous scene of Ajax and Cassandra. The fragments were found in Ruvo in 1875.

The Tomb of the Nasones.—In *Röm. Mitt.* XXXII, 1917, pp. 1–20, G. RODENWALDT reproduces and discusses six paintings now in the British Museum from the tomb of the Nasones and some old copies. On the evidence of these he posits a classicistic trend in the painting of the second century A.D. following the illusionistic fourth style.

INSCRIPTIONS

Electioneering Inscriptions.—In *Rend. Acc. Lincei*, XXVIII, 1919, pp. 387–405 ANNA SCALERA transcribes a large number of the electioneering inscriptions on the walls of houses and shops in Pompeii signed by women (or by a husband including his wife in the words "*cum suis*"), and advocating the election of such and such a candidate. Many of these names are obviously those of slaves, of women engaged in business, or of women of the town. The last mentioned were sometimes erased or smeared over as bringing no credit to the candidate. The author draws certain interesting conclusions as to the unity of family life among the Romans, and women's interest in matters of public import from which their quiet home life cut them off.

An Altered Inscription.—In *C. R. Acad. Insc.* 1919, pp. 313–328 F. CUMONT and L. CANET call attention to the fact that in an inscription found in the Mithraeum of the Baths of Caracalla the name of Mithra has been substituted for the half obliterated name of Serapis. The title *κοσμοκράτωρ* which is given to the god in this inscription was an astrological epithet attached originally to the planets, then to the sun, and to the Emperor as representative of the sun. Its appearance in the *Epistle to the Ephesians* ("rulers of the darkness of this world") marks the hostility of Christianity to astrological cults. In later Christian literature the word becomes a designation of Satan and his demons.

COINS

Roman Aes Signatum.—In *A. J. Num.* LII, 1918, pp. 1–61 (8 pls.) T. L. COMPARETTE favors the view that the examples of *aes signatum* known to us are commercial ingots, not money, and that the stamps are trade-marks.

Counterfeiting in the Roman Empire.—In *R. Belge Num.* LXXII, 1920, pp. 5–9, (pl.) J. L. HOLLENFELTZ discusses counterfeiting under Trajan, Gordian III, etc., by means of moulds, several examples of which are now in the Musée d'Arlon. He thinks that the metal used in these moulds, one of which was introduced to cast forty-four counterfeit silver pieces at once, was an alloy of tin (at least 30 per cent.) and lead.

Coinages of Augustus.—The history of the tentative coinages of Augustus up to the definitive establishment of the imperial mint in 14 B.C. is set forth in detail by E. A. SYDENHAM in *Num. Chron.* 1920, pp. 17–56 (2 pls.), with especial attention to points of disagreement with Grueber (*Coins of the Roman Republic*, II) and Laffranchi ('La monetazione di Augusto,' in *R. Ital. Num.* 1916).

Falsifications of Roman Consular Denarii.—POMPEO BONAZZI warns numismatists of the prevalence in the coin-market of genuine Roman denarii of the Republic transformed by skilful use of the burin on inscriptions into the semblance of rare or previously unknown coins. The method of falsification is exposed, the means of detection indicated, and fifteen sample specimens described and illustrated. (*R. Ital. Num.* XXXIII, 1920, pp. 71–80; 19 cuts.)

Coin of Antiochus, King of the Slaves?—A small copper coin acquired by the British Museum in 1868 with more than 180 others from Sig. Salinas, of the Palermo Museum, was ascribed by Mr. Head to Morgantina, and by Professor Percy Gardner to one of the Seleucid kings of Syria. E. S. G. R. thinks it is probably a coin issued by Eunus, self-styled “Antiochus, King of the Syrians,” who headed the slave-insurrection in Sicily that was finally crushed by Rome in 132 B.C. The description is: *obv.*, veiled head of Demeter r. wearing corn-wreath, *rev.*, ear of corn, with inscription in two lines downward BACI ANTIO (last letter doubtful). (*Num. Chron.* 1920, pp. 175–176; cut.)

GENERAL AND MISCELLANEOUS

A Manual of Roman Archaeology.—With the publication of the second volume of their *Manuel d'archéologie romaine* (see *A.J.A.* XXI, 1917, p. 218) Professor CAGNAT and Dr. CHAPOT have brought the work to a conclusion. They discuss in turn painting, mosaics, and the subjects depicted in them, cults, public spectacles in the theatre, amphitheatre and circus, agriculture, manufacture and commerce, tools, weights and measures, vehicles, boats, military equipment and decorations, garments, shoes, methods of dressing the hair, toilet articles, jewelry, furniture, cooking utensils, vases, methods of lighting, games and playthings, musical instruments, writing materials, and surgical instruments. The book is fully illustrated. [*Manuel d'archéologie romaine.* Par R. CAGNAT et V. CHAPOT. II: Décoration des monuments; Peinture et mosaïque; Instruments de la vie publique et privée. Paris, 1920, Picard. 574 pp.; 333 figs. 8 vo. 30 fr.]

Prehistoric Antiquities in Palermo.—In *Ausonia*, IX, 1919, *Varietà*, cols. 1–12 (7 figs.) B. PACE describes a collection of prehistoric antiquities in the Geological Museum of Palermo. (1) A series of palaeolithic flints from caves between Palermo and Carini belongs to the Mousterian period. These are the earliest objects of human workmanship in Sicily. (2) The Neolithic objects include an axe of basalt and a hatchet curiously ornamented with incised circles and lines; also pottery, one specimen of which has a rudely incised geometric ornament. (3) To the Bronze Age belong a series of bronze hatchets and a spear-point.

The Bernardini Tomb.—The important collection of objects discovered in a tomb at Palestrina in 1876, in excavations made at the expense of the Bernardini brothers, and later purchased for the Museo Kircheriano (now Museo Preistorico), is catalogued, described, and illustrated in detail by C. DENS-MORE CURTIS in *Memoirs of the American Academy in Rome*, III, 1919, pp. 9–90 (71 pls.). In spite of the fact that the door of the tomb was not found, it probably had a dromos and doorway, and a corbelled vaulting. The series of objects found in it, though so varied in size and material, show unity in technique and motives of ornament. The silver bowls and ivories were imported from

the East. The shields, many of the bowls, and minor objects were of local origin. The date of the burial was probably in the first half of the seventh century B.C. In 1918 an unsuccessful attempt was made to re-discover the tomb. The entire surface of the vineyard in which it was found has been worked over to such a depth that further discoveries of value on this site are improbable.

A Decorative Motive on Etruscan Bronze and Terra-cotta.—One of the surest evidences that Etruscan terra-cotta ceramics had as models works in metal is given by the recurrence on bronze and terra-cotta objects of the third and second century B.C. of a special treatment of the myth of Philoctetes in which Diomedes gets the arrows while Ulysses adds caresses to eloquence in the persuasion of Philoctetes. The same composition that is found in bronze on a patera in the Museo Archeologico, Florence (the application of the reliefs to the patera is not ancient; they probably belonged originally to bronze vases), and on other bronze pieces is repeated on a terra-cotta vase in the same collection. (T. CAMPANILE, *Boll. Arte*, XIV, 1920, pp. 37-39; 4 figs.)

An Etruscan Illustration of Homer.—In *Rend. Acc. Lincei*, XXIX, 1920, pp. 153-160 (2 figs.) G. BENDINELLI argues that the mirror found near Corneto Tarquinia and regarded by Gerhard (*Etruskische Spiegel*, IV, pl. CDXXI), followed by Ducati (*Röm. Mitt.*, XXVII, 1912, p. 265) as picturing a scene from ordinary life, represents the visit of Iris to Helen as described by Homer in the *Iliad* (III, 120 ff.). He maintains that in a work of such admittedly early date, executed under the influence of Greek models (it resembles the Attic vase-paintings of the first half of the fifth century B.C., transitional from the severe to the fine style), genre scenes without some mythological, religious or allegorical significance are extremely rare.

The Silver Bowl from Tarentum.—In *Röm. Mitt.* XXXIII, 1918, pp. 103-124 (5 pls.) HANS NACHOD describes and discusses in detail the fourth century silver bowl from Tarentum already published by Mayer, *La Cappa Tarantina*, etc., Bari, 1910.

Atalanta and Hippomenes.—In *Ausonia*, IX, 1919, pp. 78-86 (4 figs.) A. MINTO describes three hitherto unpublished illustrations of the race of Atalanta and Hippomenes. The first is on a glass vase in the collection of Lord Westbury at Castello di Vincigliata near Florence. Hippomenes, a nude figure, looks back at his competitor; she pursues him with a sword—a reminder of that version of the story according to which the unsuccessful suitors were slain (Apollodorus, III, 9, 2.). The second is on a glass cup at Rheims, from a Roman tomb of the second century A.D. The third is from a terra-cotta medallion in the Morgan collection. Here Atalanta wears the *chitoniskos-exomis* which is the regular costume of Amazons in the fifth century B.C. Hippomenes, who holds a palm of victory, stands in an attitude which is common in statues of athletes.

Terra-cotta Arulae.—The miniature altars of terra-cotta, decorated in relief, which have been found in considerable numbers in Southern Italy and Sicily and in the vicinity of Rome, are discussed, catalogued, and classified by E. DOUGLAS VAN BUREN in *Memoirs of the American Academy in Rome*, II, 1918, pp. 15-51 (7 pls.). The earliest are simply decorated cubes; but a more architectonic form soon developed; and in Rome the arula assumed a form in which the top is smaller than the bottom surface, and the narrow ends have-

a double convex curve, suggesting the term "hourglass shape." The earliest arulae are from Sicily and Southern Italy; from the discoveries it seems that Caulonia was a chief centre of their manufacture. The types of decoration are of Eastern origin, and have apotropaic or funereal significance; most common is the lion rending a bull. Sphinxes and satyrs' heads also occur. A greater range of decorative motives is found on the later arulae, including some original types, such as a winged Europa and a winged Dionysus. These subjects seem to have influenced the choice of subjects on Roman sarcophagi, which show more allegorical and less sombre themes than the Etruscan urns. Arulae are not found on the mainland of Greece; but small sculptured altars were sometimes placed on tombs in Asia Minor; and the Greeks of Italy may have imitated this practice by the dedication of these little terra-cotta altars in tombs. The hourglass shape is not found in Sicily or Southern Italy. It is probably due to Etruscan influence, and may have had its origin in a baetylic cult.

Roman Razors.—In *Ausonia*, IX, 1919, pp. 139–160 (23 figs.) M. DELLA CORTE discusses the forms of Roman razors. Two shapes from the classical period are known: (1) a blade with a straight edge and a straight back, the end cut so as to make an acute angle with the edge, the blade folding into a handle of bone or ivory, often ornamented, but shaped so that the fingers could grip it firmly and at the same time manipulate the blade; (2) a blade with a curved edge (the *curva theca* of Martial, IX, 58, 9–10), and with a handle of simple rectangular form. A shape similar to the first, but not identical with it, is shown on Christian monuments of the fourth and fifth centuries, and marks the transition to mediaeval and modern shapes of razors.

Retiarii.—In *Röm. Mitt.* XXXII, 1917, pp. 147–167 (6 pls.), H. WOOLMANN describes and discusses the equipment of the *retiarii* and the various episodes of the battle between them and other gladiators as depicted on clay lamps.

Ad Maecium.—In *B. Com. Rom.* XLVI, 1918, pp. 101–114 ALBERTO GALIETI identifies Ad Maecium, the scene of the battle between Romans and Volscians in 389 B.C. and probable source of the name of the *tribus Maecia*, with Sublanuvio.

The Driving of the Nail.—In *B. Soc. Ant. Fr.* 1919, pp. 202–206 J. TOUTAIN reports the substance of a correspondence with Sir James Frazer on the Roman rite of the driving of the nail (cf. *A. J. A.* XXIII, 1919, p. 431). According to Livy (VII, 3) this was an annual practice which later became occasional. Frazer believes that in the earliest period it was also occasional and private; that later it became an official and annual ceremony, and then lapsed into occasional use.

A Bibliography of the Excavations of the Janiculum.—Under the title *Les fouilles du Janicule à Rome* (Geneva, 1920; 20 pp.) G. DARIER has published a chronological bibliography of works on the subject indicated in the title which appeared between 1906 and 1918.

The Forum at Pompeii.—In *Memoirs of the American Academy in Rome*, II, 1918, pp. 67–76 (3 pls.; fig.) ALBERT W. VAN BUREN publishes some notes on monuments of the Forum at Pompeii. (1) The torso of the acrolithic cult statue of Jupiter has a relief on the back. This relief is earlier than the statue, and not later, as has been supposed. A stone with a sculptured relief of presumably Greek origin was reworked for the body of the statue.

(2) In the pavement of the Forum was a great inscription in letters of bronze. The cutting for the letter Q still remains. (3) The arch at the south end of the Forum was the *ianus* of Pompeii. It did not support a colossal statue of Augustus, as Mau conjectured. (4) The identification of the central one of the three halls at the south end of the Forum as the Curia is confirmed by an architectural detail which is in accordance with Vitruvius' precept for the construction of a curia (V, 2). (5) A spacious hall opening from a portico near the north end of the west side of the Forum was probably a school. (6) The changes in the plan and boundaries of the Forum due to the Roman colonization of Pompeii were much less radical than some archaeologists have supposed. The Forum is typical of the Hellenistic East rather than of Rome.

The Gallic Fire and Roman Archives.—In *Memoirs of the American Academy in Rome*, II, 1918, pp. 55-65, LUCY G. ROBERTS concludes from an examination of the archaeological and literary evidence that many of the important public buildings of Rome, including the temples of Saturn, Castor, Dios Fidius, Diana, and Ceres, survived the fire of 387 B.C. The Gauls seem to have respected temples: the only one of which the destruction is certain was that of Apollo. It is, therefore, probable that most of the international documents deposited in the temple escaped destruction, as well as the *leges* in the temple of Saturn, and the *senatus consulta* in the temple of Ceres.

The Arcadian Element in Roman Legend.—In *Mél. Arch. Hist.* XXXVIII, 1920, pp. 63-143 JEAN BAYET in a comprehensive investigation of the origin and development of the Arcadian element in the legendary history of Rome, reaches certain conclusions which he regards as established. This Arcadian element was introduced into Italy from Magna Graecia, not Sicily, at an early date, and reached Latium and Etruria in the sixth century, but not in such a way as to impose itself at that time upon Rome and to assume a national character. By the end of the fifth century, however, when the Italian Greeks had begun to enter into political relations with the peoples to the north of them, they built up a unified form of the legend which gave to the earlier stories a more national tone, into which were drawn various non-Arcadian elements. The identification of Latins and Oenotrians, due perhaps to Hippys of Rhegium, was realized about the beginning of the third century, and then established itself so firmly at Rome that it could not be entirely displaced by the triumph of the Trojan legend.

Virgil and Ostia.—In *Virgile et les origines d'Ostie* (Paris, E. De Boccard, 1919, x, 818 pp.) JÉRÔME CARCOPINO develops the thesis maintained by him in 1912 (*C. R. Acad. Insc.* 1912, pp. 104 f.). The main theory of this thesis is that in the *Aeneid* Lavinium was in no way connected with the history of Aeneas: it was the town of the Laurentes and of Latinus, built on the site of the modern Pratica. The town which Aeneas founded was Troy, at the mouth of the Tiber, where was afterwards the old federal sanctuary of the Arulenses (Arula? etymologically connected with *ara*: *Aen.* VIII, 85), the primitive Ostia. The prophecies and miracles in the *Aeneid* referred by a mistaken tradition to Lavinium in reality centred about this New Troy of Aeneas. Further, the cult around which are gathered these prophecies, miracles, and sacrifices was not, as commonly supposed, that of the Penates, worshipped at Lavinium; but the cult of Vulcan, worshipped in the old federal sanctuary on the site of Ostia, and identical with Thybris, the River-God.

Virgil's reasons for thus describing the New Troy of Aeneas as a shrine in the primitive home of Ostia, sacred to Vulcan, God of the Tiber, were partly political, that he might further the plans of Augustus for the rebuilding of Ostia, and the establishing of the harbour actually built in the time of Claudius and named by Nero the Portus Augusti; partly moral, that he might revivify the ancient religion of Rome, by honor paid to this god who was worshipped before the advent of Jupiter to Rome.

SPAIN

Implements of the Bronze Age.—In *Proc. Soc. Ant.* XXXI, 1919, pp. 151-170 (4 figs.) R. A. SMITH describes a series of bronze implements found in the southeast of Spain by the brothers Siret, and summarizes the conclusions of L. Siret regarding the chronology of the Bronze Age in Spain, together with the criticism to which these views have been subjected by J. Déchelette.

Spanish Bronze Votive Offerings.—In *B. Soc. Esp.* XXVIII, 1920, pp. 82-85 (pl.), N. SENTENACH writes on antique Spanish bronzes of about the sixth century B.C., which include representations of human figures, animals, fantastic combinations of animal and man, and other objects. They bear resemblance to the art of other Mediterranean countries of this early date.

FRANCE

A Prehistoric Drawing.—In *C. R. Acad. Insc.* 1920, pp. 303-310 (2 figs.) Count BEGOUEN describes a remarkable drawing discovered in the cave of the Trois-Frères at Montesquieu-Aventes (Ariège). It represents a man walking to the left, with head turned in front view. The face is covered with an animal mask and long beard and surmounted by long ears and the antlers of a stag. The man wears a horse's tail. The figure is comparable with a drawing on schist from Lourdes, representing a man in somewhat similar animal disguise. As the costume is borrowed from different animals, it does not seem to represent either a hunter's ruse or a ritual dress. More probably the drawing represents a spirit which can assume different forms; or a magician who has the same power. Count Begouen inclines to the latter view. The cave contains numerous drawings of animals, on which a probably magic sign in the shape of a P often occurs.

The Arena of Paris.—The work of J. C. and Jules Formigé, entitled *Les Arènes de Paris*, is the subject of criticism by C. JULLIAN in *R. Ét. Anc.* XXII, 1920, pp. 187-201. The existing ruins of the Arena are to be attributed to the period of Hadrian. The building was probably destroyed in 275-6 A.D. The structure is not a "demi-amphitheatre"; it is a theatre with a circular arena, analogous to the orchestra of the Greek theatre, and adapted to gladiatorial and other arenic exhibitions as well as to theatrical performances. This type of theatre is common in Northern France. The pure form of Roman theatre is found in the South. There are no substructures under the arena of Paris because no elaborate machinery was needed for the comparatively simple spec-

tacles presented here. M. Jullian doubts whether the remains identified as *carceres* by MM. Formigé are properly so-called. He also doubts whether the evidence justifies the elaborate reconstruction of the *scaena* which these authors give. The size of the theatre was about the same as that of the Arena of Nîmes, and it could accommodate about sixteen thousand spectators. The names inscribed on the seats perhaps indicate proprietorship of certain places in the theatre. The building was of squared stones about 0.13m. in height. No brick was used. The orientation was E. N. E., and the theatre commanded a magnificent view. Its situation was between the road to Sens and a country road leading to villas on the Seine. M. Jullian does not believe that there was a permanent Circus at Paris, but a temporary structure on the site indicated by MM. Formigé, on the bank of the Seine in the Quartier St. Victor. M. Jullian believes that the Gallo-Roman theatres had a special relation to the indigenous civilization, because their sites seem to have been regularly attached to the sites of Gallic cults. No province of the Roman empire has so many theatres as Gaul.

Gallo-Roman Votive Offerings.—In *B. Soc. Ant. Fr.* 1919, pp. 146-148, J. TOUTAIN maintains that ex-votos from Gallo-Roman sites, representing children in swaddling clothes, parts of human bodies, and animals, mark a ritual substitution for actual human and animal sacrifices practiced in primitive times (see Caesar, *B. G.* VI, 16).

Fish-ponds in Roman Gaul.—In *B. Soc. Ant. Fr.* 1919, pp. 183-196 G. LAFAYE communicates the results of studies on methods of trapping and imprisoning fish practiced in ancient times, especially in the salt and fresh waters of ancient Gaul.

A Roman Milestone.—In *B. Soc. Ant. Fr.* 1919, pp. 118-123, E. CHÉNON comments on the inscription of a Roman milestone found at Trouy in the eighteenth century (*C.I.L.* XIII, 8940), recording the restoration of the road it marked in the reign of Maximinus and Maximus (237 A.D.). He concludes that the stone originally stood at Saint-Florent, perhaps on the bridge over the Cher.

SWITZERLAND

Cocliensis as an Epithet.—In *B. Soc. Ant. Fr.* 1919, pp. 257-258 is a note by J. HANNEZO on the epithet Cocliensis given to Liber Pater in an inscription found at Saint-Prex, near Morges, Switzerland. The epithet is not derived from *cochlea*, as M. Chapot suggested (*Ibid.* 1917, p. 197), but like other epithets ending in *ensis*, is from a place-name, possibly from *Cochia*, which may have been a Celtic name adopted by the Romans.

GERMANY

The Discovery of the Rhine.—In *Mél. Arch. Hist.* XXXVIII, 1920, pp. 5-28, A. GRENIER discusses the discovery of the Rhine. He gives a résumé of the allusions to central Europe in the earliest Greek literature, sees a probable

reference to the Rhine in Apollonius of Rhodes, argues that Polybius knew nothing of that river although he is the first ancient writer known to us who mentions the Alps, and attributes the first reference to the Rhine by name to Posidonius. The extent of the latter's knowledge of the river is very uncertain, and the real discovery of the Rhine is to be assigned to Caesar.

GREAT BRITAIN

Flints from Grime's Graves, Norfolk.—In *Proc. Soc. Ant.* XXXI, 1919, pp. 78–104 (77 figs.), H. G. O. KENDALL compares flint implements discovered at Grime's Graves in Norfolk with similar implements from Avebury Down in North Wiltshire, and on the basis of this evidence as well as of botanical and geological data concludes that the tools from Grime's Graves are not earlier than the Neolithic Period.

A Megalithic Monument from Jersey.—In *Proc. Soc. Ant.* XXXI, 1919, pp. 133–144 (4 figs.) R. A. SMITH discusses a megalithic monument which was removed early in the nineteenth century from its original site near St. Helier's, Jersey, to Henley-on-Thames. It was a circle of stones, 21 feet in diameter, approached by a passage walled with similar large stones. Within the circle are several cells formed by pairs of stones projecting from the wall. Each pair was covered with a horizontal slab. The whole monument was covered with a tumulus when it was discovered. The original structure dates from the megalithic period; but the mound was probably constructed by people of the Bronze Age, who may have used the building for interments. The circle has a strong resemblance to a neolithic house at Pléneuf on the French coast. Similar circular dwellings have been found in Cornwall.

Prehistoric Shields.—In *Proc. Soc. Ant.* XXXI, 1919, pp. 145–151 (2 figs.) R. A. SMITH discusses prehistoric bronze shields found in Great Britain and Ireland. Some are ornamented with small bosses; others with concentric circles in relief. Continental evidence alone would indicate that the shields belong to the Hallstatt period; but since the Iron Age in Britain seems to have begun much later than on the Continent, these shields, which are apparently of local manufacture, may be of later date than similar Hallstatt remains. Most of them are too thin to have been of practical use, and may have been made as votive offerings.

The Antiquities in the Brentford Public Library.—In *Archaeologia*, LXIX, 1920, pp. 1–30 (2 pls.; 30 figs.) R. A. SMITH describes the more important objects in the Layton Collection of antiquities in the Public Library at Brentford. Most of them were brought to light during dredging operations in the Thames at Kew many years ago. The Neolithic Period is represented by many specimens including picks, celts, daggers, etc., and the Bronze Age by vessels of pottery, daggers, spearheads and a sickle of bronze, as well as by two bone daggers. There are ancient British coins, including two of gold; a remarkable late Celtic wooden bucket cased with bronze, and a bronze bowl which was, perhaps, a water-clock; a Roman iron sword with bronze scabbard, Roman brooches, a few good specimens of Anglo-Saxon antiquities and numerous mediaeval objects.

Roman Cirencester.—In *Archaeologia*, LXIX, 1920, pp. 161–209 (4 pls.; 21 figs.) F. HAVERFIELD discusses Roman Cirencester—its name and location, its walls, gates and buildings, the town plan and various detailed finds such as mosaics, worked stones, sepulchral monuments and inscriptions. The history of the place is worked out upon the evidence of the pottery and coins. There are appendices: on the name, which is derived from the Latin *Corinium*, by W. H. STEVENSON; on a figure of Eros, by H. STUART JONES; and on the so-called *Matres*, by M. ROSTOVITZ.

EARLY CHRISTIAN, BYZANTINE AND MEDIAEVAL ART

GENERAL AND MISCELLANEOUS

The Two "Sassanian" Dragon Reliefs in the Constantinople Museum.—In *Publikationen der Kaiserlich Osmanischen Museen*, No. 4 (64 pp.; 5 pls.), H. GLÜCK discusses from every angle the two dragon reliefs purchased by the Constantinople museum in 1916—Nos. 790 (1164) and 791 (1163). Although Strzygowski, who knew the reliefs as early as 1889, regarded them



FIGURE 6.—"SASSANIAN" DRAGON RELIEFS: CONSTANTINOPLE.

as Turkish, Sarre, and later Mendel, the cataloguer of the museum, called them Sassanian. Glück shows them to be Turkish and probably to have come from the decoration of Alaeddin's thirteenth century wall at Konia. The two dragons appear to be of opposite sex, reminiscent of good and evil spirits confronting one another (Fig. 6). The type is found in numerous monuments, reaching back to Sassanian times. But the different treatment of depth and of mass distinguishes these dragons from related Sassanian examples. In fact it appears, since most of the parallels are with works referable to the steppes, that even in Sassanian times the type was derived from northern sources. The Turks brought it southward when they migrated. Along with the material collected by Strzygowski this helps to build up our

knowledge of the northern peoples of the Near East and to throw new light on obscure phases of mediaeval art.

Mediaeval Monuments in Asia Minor.—In *Rass. d'Arte*, VII, 1920, pp. 102–108 (6 figs.), B. PACE tells something of the work of the Missione Archeologica in Asia Minor and describes some important monuments in Adalia and Konia. To the rapidly growing museum collection in Adalia has just been added a beautiful Byzantine plaque, in fragmentary condition, found among the remains of a little Byzantine church in Adalia. The fragment represents the upper part of the angel Gabriel, dressed in Hellenic chlamys and holding the staff and globe—the latter object has been changed by a Turk into a disc with Arabic inscription of the name of God. There is not yet sufficient information for dating the work. In Konia the most important monuments are the mosque of Sultan Alaeddin-Minbar, the Injeminarè Jamissi, and the mosque of Karà Softalar. The second of these is the most exquisite and is a fine example of Seldjouk art. In contrast to the Arabic style, the ornament of which seems only to have the purpose of covering surface, here the ornament carries out and emphasizes the lines and functions of the architecture. The little mosque of Karà Softalar is of central plan and is enriched with plaques of lace-like work.

Armenian Architecture.—In *Syria*, I, 1920, pp. 253–263 (4 pls.; 3 figs.) FRÉDÉRIC MACLER gives a summary account of the origins and history of Armenian architecture, illustrated by colored plates from water-colors by A. Fetvadjian. The earliest existing churches are of the sixth century and show Syrian influence. To the seventh century belongs the polygonal church of Zwarthnots, the plan and ornamentation of which are largely derived from Greek and Syrian sources. In the era of the Bagratid dynasty at Ani and the Ardzrounis at Van (ca. 900–1050 A.D.) numerous churches and convents were constructed. The eleventh century marks the highest development of Armenian architecture, at Ani, Van, Althamar, and Kars. In the twelfth and thirteenth centuries, under Georgian domination, the Syrian and Byzantine influences apparent in earlier work are supplanted by an oriental element the origin of which is probably to be found in Persian architecture as developed under the Arabs at Bagdad. M. Macler rejects the theory of Strzygowski that Armenian architecture had an initiatory rôle in the development of some features of Byzantine construction, and agrees with Diehl that Armenian architecture was influenced by Byzantium as well as by the Orient. The dome, which was a form known to the Assyrians, may have come to Armenia through Persia. The polygonal plan is apparently Cappadocian in origin. But the Syrian influence is predominant.

Legends of St. Thomas.—In *Mél. Arch. Hist.* XXXVIII, 1920, pp. 29–62 GIOVANNI PANZA discusses the legends attached to the life of St. Thomas in India and to the transfer of his body to Ortona, the influence of the cult of the Cabiri or Dioscuri upon that of the saint, and the connection of this with that of Theseus.

The Rule of St. Pachomius.—In *C. R. Acad. Insc.* 1919, pp. 341–348, T. LEFORT describes Coptic texts, now in the Bibliothèque Nationale and the British Museum, of the Rule of St. Pachomius, the founder of a celebrated monastic order of the third century. The text confirms the authenticity of St. Jerome's version of the Rule, which has been questioned.

An Invocation to Christus Medicus.—A unique inscription recording an invocation to Christus Medicus is published by PAUL MONCEAUX in *C. R. Acad. Insc.* 1920, pp. 75–83 (fig.). It is to be dated in the fourth century or early in the fifth. The phraseology is strikingly parallel to a passage from Commodianus. The inscription is probably of Donatist rather than Catholic origin. It is from Thamugadi, which was an active centre of Donatism.

An Arabian Copper Lantern.—In *Syria*, I, 1920, pp. 56–57 (pl.) G. MIGEON describes a copper lantern which once hung in the Mosque of Omar in Jerusalem, and is now in the Louvre. It is an exquisite example of workmanship in pierced metal, showing four different systems of decoration, as well as a repeated inscription in the same technique: "There is no God but Allah." The Mosque of Omar was built by the eleventh Khalif, Abd el Malek (691–692 A.D.) and was repaired in the ninth century.

Portable Reliquaries.—Portable reliquaries of the early mediaeval period are classified and described by Sir WILLIAM MARTIN CONWAY in *Proc. Soc. Ant.* XXXI, 1919, pp. 218–240 (11 figs.). Early reliquaries seem to have been "precious boxes turned from their original use and casually employed to hold relics." The later types originated in a form imitative of the fifth century sarcophagus. Of these the first had a lid with double slope; later a four-sloped top was developed; and still later a taller and flatter form with concave ends. The Celtic reliquaries took the form of a roofed building. But the reliquary was first conceived not as a house but as a tomb.

The Saw-fish.—In *Proc. Soc. Ant.* XXXI, 1919, pp. 20–34 (21 figs.) the mediaeval legend of the saw-fish and the fantastic forms which the fish assumed in manuscripts and sculpture are discussed by G. C. DRUCE. The attempts of the fish to keep up with ships became a frequently repeated allegory, in which "the sea is the world, the ship and its crew godly folk who pass through its storms successfully; while the saw-fish signifies those who make a good beginning in well-doing but . . . fall back into their old bad habits." Mr. Druce thinks that the original form of the saw-fish may have been suggested by the *pristis antiquorum*, a Mediterranean fish.

Architectural Terms.—In *B. Soc. Ant. Fr.* 1919, pp. 233–247, L. DEMAISON discusses the use of certain technical terms in mediaeval references to ecclesiastical architecture: *alae*, *wassives*, aisles of a church; *coiffe*, *cucufa*, equivalent to the later *chevet d'église*, the rounded end of the choir; *deambulatorium*, any passage or corridor, not restricted to the passage round the choir; *ouïes*, the windows of a bell-tower; *vestibulum*, porch, aisles.

ITALY

The Baptismal Font of Tino di Camaino.—The font which Tino di Camaino finished in 1312 for the cathedral of Pisa has long been considered to have completely perished with the exception of the inscription. Two fragments of sculptured marble found near the cathedral in 1902 are identified by P. BACCI in *Rass. d'Arte*, VII, 1920, pp. 97–101 (6 figs.), as parts of this monument. One of them, with only parts of trees and a foot and leg is from the scene representing the Baptism of Christ; the other, with three figures, is from the group of the halt and the blind who wait for the angel to trouble the waters. Even in its dilapidated condition this second fragment is a remarkable example of the

strength of Tino's work and marks him as worthy of his great master, Giovanni di Nicola.

The "Cup of Constantine" a Forgery.—In *L'Arte*, XXIII, 1920, pp. 157-159 (2 figs.), G. WILPERT shows that the so-called Cup of Constantine in the British Museum is a forgery of the nineteenth century based on the publication of a South Italian miniature. Since the cup was currently accepted as the earliest approximately dated example of the bearded Christ and of the crossed nimbus, its extraction from the series of representations of Our Lord is anything but painless. For example, the problem of the Sidamara sarcophagi assumes a new aspect because the crossed nimbus on the Berlin fragment must now be accepted as dating the monument in the fifth or sixth century.

Christians and Pagans on the Via Appia.—The interesting monuments that have been discovered under the basilica of S. Sebastiano are described by R. PARIBENI in *Rass. d'Arte*, VII, 1920, pp. 5-8 (5 figs.). Under the apse is a Roman villa with walls ornamented with splendid frescoes that remind one in their rapid, sketchy treatment of such work as Corot's. Under the right wall are five catacombs of good construction and elegant decoration. Under about the middle of the church just below some sarcophagi with inscriptions of the fourth and fifth centuries are rooms with walls decorated with graffiti inscriptions, nearly all invoking Peter and Paul. And near these rooms, at a depth of 14 meters from the pavement of the church, are three tombs, apparently of about the second century A.D., one with frescoes, the subjects of which are for the most part birds, fruit, and flowers, the other two with remarkably well preserved stucco decorations. Though there are some features of the decorations of these tombs that suggest Christian symbolism, it seems likely that the tombs were pagan and that into them some Christian motives were introduced by the artists.

Dante Monuments.—In *Rass. d'Arte*, VII, 1920, pp. 43-49 (11 figs.), A. MUÑOZ describes the restorations which he has undertaken in Viterbo and Anagni in anticipation of the commemoration in 1921 of the sixth centenary of the death of Dante. The monuments being restored are connected with the writings or life of the poet and include the church of S. Silvester in Viterbo and the palace of Boniface VIII and the Palazzo Comunale in Anagni.

The Relief in the Tomb of Dante.—In *Felix Ravenna*, Fasc. XXIX, 19, pp. 75-80 (10 pls.), A. ANNONI questions whether Pietro Lombardi is the author of the relief which decorates Dante's tomb at Ravenna. The inscription of Lombardi is on the frame rather than on the relief itself, and, in fact, it appears that part of the relief has been hidden by the sarcophagus in order to improve the perspective, which would otherwise be too faulty to impute to Lombardi. The rosettes in the relief compare very unfavorably with those on Lombardi's column bases at Ravenna. The relief may be an earlier one incorporated in the monument of Lombardi.

Works in America Related to Giovanni Pisano.—In *Z. Bild. K.* XXXI, 1920, pp. 111-114 (6 figs.), W. R. VALENTINER writes on sculptures in American collections that show more or less close relationship to Giovanni Pisano. Good authorities have attributed a Madonna in the Blumenthal collection, New York, to that master himself. But the grace and charm of the work, the naive conception of the Child, and the close similarity of the form and technique to the grave monument of Gastone della Torre in S. Croce, Florence,

make the attribution of the Madonna to Tino da Camaino more satisfactory. A fragmentary Madonna in the Boston Museum of Fine Arts and a well preserved one in a New York private collection are very closely related to the Madonna in the Kaiser Friedrich Museum, Berlin, which is ascribed with some doubt to Giovanni Pisano and must have come from the same workshop. A Madonna in the collection of R. Mortimer, Toledo, is more distantly related to Pisano and is probably by a Sieneese master. Two pilasters with trumpet-blowing angels in the Metropolitan Museum, New York, have the best claim of any works in America to be attributed to the Pisan master. They undoubtedly belonged to the pulpit of the cathedral at Pisa, where they must once have formed part of the scene of the Last Judgment.

Sieneese Paintings in America.—A number of important Sieneese paintings, particularly by followers of Duccio, are discussed by F. M. PERKINS in *Art in America*, VIII, 1920, pp. 195–210 (10 figs.). A Madonna in the collection of Mr. D. F. Platt is shown to be not by Segna di Buonventura, to whom it has been ascribed, but by a follower of Duccio unknown by any other work. The same is true of a painting of the Magdalene in the Boston Museum of Fine Arts, though the Magdalene painting bears very close resemblance to an altarpiece in Mr. Platt's collection, and the two may be by the same follower of Duccio. A Madonna in the Boston Museum is not by Ugolino, to whom it is assigned, but by a Ugolinesque follower of Duccio. Much more closely related to Ugolino was the author of an Apostle in the Blumental collection. A splendidly preserved Madonna in the collection of Mr. Philip Lehman lacks the spontaneity and vigor necessary to substantiate the ascription to Duccio himself and must be considered a school piece. Finally, Ambrogio Lorenzetti is represented by three works: the Crucifixion in the collection of Mr. Paul J. Sachs, which was formerly ascribed to Pietro, a Madonna in Mr. Lehman's collection, here reproduced for the first time, and an earlier Madonna belonging to Mr. Platt.

New Remains of Romanesque Painting.—In *L'Arte*, XXIII, 1920, pp. 200–206 (5 figs.), L. CELLUCCI publishes some fragmentary paintings which supplement the series, already noted, of Romanesque paintings of Terra di Lavoro, belonging to the school of Montecassino or related to it. The most important are remains of frescoes in a grotto behind the apse of the church of San Michele in Arpino. Others are in the chapel of San Nicola in Galluccio, and in two churches of the Annunciation in Minturno and Maranola.

Joan of Arc and Bologna.—In *Rass. d'Arte*, VII, 1920, pp. 134–141 (6 figs.), C. RICCI examines the documents and legends relating to the Bolognese descent of Joan of Arc, pointing out the weak basis upon which they are founded and offering new explanations of some of the more plausible of them. It is suggested that the fresco of the heroine on the pilaster of St. Petronius at Bologna was executed at the order of Fileno della Tuata, historian, when he returned from France to Bologna full of enthusiasm for the deeds of Joan, which he had heard recounted. A poor painting in the museum of Versailles is noted as of iconographical interest. It is Lombard fifteenth century work done, as is shown by the inscription, during the imprisonment of Joan as an *ex-voto* offering for her salvation. It represents the Madonna between St. Michael and Joan of Arc. *Ibid.* p. vii (fig.), the author brings as further evidence for his opinion that the Versailles painting is provincial Lombard work

of the fifteenth century, a painting of the Madonna and Saints in Contrada Poan, near Bassano.

SPAIN

A Carthusian Monastery.—In *B. Soc. Esp.* XXVIII, 1920, pp. 86–93 (3 pls.) C. S. CARRERES traces the history and describes the present condition of the monastery of Vall de Cristo, founded near the end of the fourteenth century. The various entrance portals of the monastery and church together with the fragments of the Gothic cloister show the most interesting architectural remains. The library of the monastery forms the basis of the present library of the Instituto de Castellón, and the mediaeval paintings and other art objects from the same source make up a large part of the collection of the Museo de Castellón.

FRANCE

The Origins of Saint-Maur-des-Fosses.—The site of the monastery of Saint-Maur-des-Fosses founded in 638, is known in mediaeval documents as *Castrum Bagaudarum*. C. JULIAN, who discusses the tradition in *R. Ét. Anc.* XXII, 1920, pp. 107–117, believes that the massive foundations belong to the period of the Roman empire, when a *castellum* would not have been constructed so far from the frontier. The site may have been that of a temple or villa. The attribution of the ruins to the Bagaudes is due to a tradition which exalted these outlaws of the third and fourth centuries as defenders of Christianity.

A Merovingian Font.—In *B. Soc. Ant. Fr.* 1919, pp. 110–114 (fig.) L. COUTIL discusses some neglected sculptured stones which were found long ago in the court of the bishop's house at Évreux, and are now in the museum of that town. They form the greater part of the frame of a circular cavity, and may have been the top of a font or small altar. They are ornamented with Christian symbols and rudely carved animal and human figures in low relief, and show fragmentary inscriptions. The workmanship is apparently earlier than the eleventh century and, perhaps, belongs to the Merovingian period.

Capsum and Altarium.—In *B. Soc. Ant. Fr.* 1919, pp. 129–131, the Abbé PLAT discusses the meaning of the word *capsum*, which occurs in the description of the first basilica of St. Martin by Gregory of Tours. *Capsum* is properly a liturgical rather than an architectural term, and is equivalent to *aula*. It designates that part of the nave beyond which the choir did not pass. Gregory uses the word *altarium* in two senses: in one passage it means the whole space between the western entrance of the choir and the end of the building; in another the sanctuary and the choir combined in front of the *memoria* or tomb of the saint.

BELGIUM

The School of Godefroid de Claire.—In *Burl. Mag.* XXXVII, 1920, pp. 11–18 (2 pls.), H. P. MITCHELL gives the eighth installment of his study of the enamels of the Mosan school, summing up the contents of the previous articles and publishing some new pieces by Godefroid. One of these, a plaque in the British Museum representing Moses and the brazen serpent, shows the

style of the very early work of the master, in about 1140-50; another, a plaque in the Metropolitan Museum, New York, with the Crucifixion as subject, shows the style of the end of his career, in about 1170-75.

The Cathedral in Relation to the Town.—In *Mh. f. Kunstw.* XIII, 1920, pp. 67-87 (8 figs.), F. HOEBER uses the Romanesque cathedral of Tournai as a characteristic example of the relation of the situation of the cathedral to the plan of the rest of the town in mediaeval times. In contrast to the Greek-Oriental temple, which stood apart from its surroundings, the mediaeval European church, the center of every phase of the life of the people—political, commercial, artistic, and social, as well as religious—had the places for all these activities grouped closely about it. In the open space before the west front of the church many public festivities were held; the dwellings of the clergy and even of laymen surrounded the church, and markets were close by; so that in the silhouette of the town as a whole the church was the dominant note in a compact group. The modern move toward clearing away these surroundings and isolating the church is, therefore, contrary to the mediaeval spirit, just as the modern distinction between secular and religious was unknown in mediaeval times.

An Evangelarium of the Twelfth Century.—In *B. Soc. Ant. Fr.* 1919, pp. 214-222 (fig.) A. BOINET describes a fine Latin manuscript of the gospels bequeathed to the Municipal Library of Metz by the late Baron Salis. It is dated 1146, and was made by a monk of the Abbey of Saint Lambert de Liesies, in Hainault. The initials and miniatures are of great beauty, and the manuscript is of value as an example of a too little known group of Northern manuscripts.

GERMANY

Mediaeval Hanseatic Art.—In *Z. Bild. K.* XXI, 1920, pp. 57-71 (31 figs.), G. F. HARTLAUB traces in the work of a group of sculptors in Lübeck in the first half of the fifteenth century the characteristics of one predominant man, John the Younger (?), who bids fair to gain, when better known, an equal rank with such masters as Sluter, Quercia, and Ghiberti. What speaks most plainly for the contemporary fame of this sculptor and his school is the fact that the Abbey church of Vadstena took nearly all his work for about ten years. And the sculptures made for Vadstena have a wonderful wealth of motives in the beautifully carved faces and figures.

ROUMANIA

Fortified Churches of Transylvania.—In *Proc. Soc. Ant.* XXXI, 1919, pp. 165-174 (7 figs.) JAMES BERRY discusses the fortified churches of Southern Transylvania. Most of these were built by Germans, who first occupied this region in the thirteenth century; the greater number date from the fifteenth and sixteenth centuries. They are interesting chiefly for their encircling walls, entrances, and towers, which form more complicated fortifications than are found in connection with churches of Western Europe. The masonry is rude and there is little ornament. The wooden structures which formed the projecting galleries of the towers are often preserved.

GREAT BRITAIN

A Holy Water Stock.—In *Proc. Soc. Ant.* XXXI, 1919, pp. 119–122, D. H. S. CRANAGE describes a holy water stock recently found at Shawbury Church, Shropshire. It is of sandstone and its date is late Norman. “The capital is cut up with rudimentary foliage, and nail-heads are added.”

A Pyx from Godsfield.—In *Proc. Soc. Ant.* XXXI, 1919, pp. 63–65 (fig.) G. W. W. MINNS connects a pyx discovered at Godsfield, Hants, with a Preceptory of the Hospitallers of St. John established on this site in 1138. Sir HERCULES READ expressed the opinion that it is of English origin, and to be dated about 1320. It is decorated with a scroll design of leaves.

A Relief from St. Bartholomew's.—In *Proc. Soc. Ant.* XXXI, 1919, pp. 123–124 (pl.), E. A. WEBB discusses a sculptured stone found on the site of the chapter-house of the Augustinian monastery of St. Bartholomew, West Smithfield. It was the arm of the Prior's chair. A kneeling Augustinian canon in the habit of his order is represented upon it in relief.

The Old Lady Chapel of Westminster Abbey.—In *Archaeologia*, LXIX, 1920, pp. 31–44 (7 figs.) H. F. WESTLAKE discusses the old Lady Chapel of Westminster Abbey in its relation to the Romanesque and Gothic churches. *Ibid.* pp. 45–46, the Archdeacon describes the account-rolls of the Lady Chapel.

RENAISSANCE ART

GENERAL AND MISCELLANEOUS

North and South in Art.—In *Z. Bild. K.* XXXI, 1920, pp. 98–103, J. STRZYGOWSKI writes a short account of the fundamental principles involved in his recent studies. Attention in the past, especially by Wölfflin and Riegl, has been centered upon periods, with too little regard for peoples, whereas race is a more important factor in development than time. The importance of the north as distinct from the south in artistic evolution becomes more and more evident. The emphasis upon the human figure is given by the south; movement and space, particularly as the latter is expressed in landscape, are the true realms of northern art. Even during the Renaissance these were the fields of interest—especially in the crafts, the natural medium of the north—whenever the north expressed itself.

Germany and Holland.—In *Z. Bild. K.* XXXI, 1919, pp. 3–10 (4 figs.), C. HOFSTEDE DE GROOT discusses the artistic relationships between Holland and Germany in the seventeenth century. Most of the German artists who went to Holland for training later returned to their own country but did not transplant Dutch characteristics to German soil. Many of the Dutch artists who went to Germany had Italy as their ultimate goal. The one whose journeys we know most about is Lambert Doomer, whose drawings, in which the interest is almost equally divided between landscape and architecture, tell much of the places he visited.

Cryptographic Inscriptions on Primitive Paintings.—In *B. Soc. Ant. Fr.* 1919, pp. 156–160, F. DE MÉLY presents the results of investigations on disguised inscriptions in primitive paintings. He finds confirmation of his belief

in the use of these inscriptions in a passage of Roger Bacon, suggesting the employment of letters from different alphabets for secret writing; and in a contract made by a painter of Ghent in 1434, arranging for the use of two sorts of letters in "the devices."

ITALY

Florentine Painted Glass.—In *Boll. Arte*, XIV, 1920, pp. 3-6 (3 pls.), P. TOESCA discusses the art of window making in the fourteenth and fifteenth centuries in Florence. A round window, *occhio*, in the façade of Santa Maria Novella shows in the design such close affinity to the frescoes on the walls of the Spanish Chapel that it may be attributed to Andrea di Bonaiuto, who was painting in Santa Maria Novella in 1365-67. A comparison of this work with *occhi* of Santa Maria del Fiore, shows how much more successful fourteenth century windows were than most of those of the first half of the fifteenth, with designs by such artists as Ghiberti and Donatello. The traditions of the art of glass were abandoned in these years in an effort to produce the effect of other arts. But a window in the façade of S. Croce, which shows the characteristics of Giovanni di Marco, is an exception among windows of the first half of the fifteenth century; for it has more of the decorative character of true glass work.

A Florentine Theatre.—That pictorial art as well as literature preserves a record of the theatrical art of Florence in the time of the Renaissance is shown by O. FISCHER in *Z. Bild. K.* XXXI, 1919, pp. 11-20 (9 figs.). Abraham, the Russian bishop of Ssusdal has left a description of the festival of the Annunciation which he beheld in Florence the 25th of March, 1438; his account is full of wonder at the effect, with little emphasis upon the mechanism. It is the mechanism which interests Vasari in his description of Brunelleschi's staging of the drama. He describes all the mechanical devices by which the children representing angels were held in place about the dome of the church, how the doors of heaven were arranged, etc. The Paradise which Brunelleschi created has been preserved in a painting by his pupil Michelozzo. His decoration of the Portinari Chapel in Milan reproduces much of the scene as enacted according to Brunelleschi's arrangement. And one may well believe that in the case of the angels, *e.g.*, antique victories were not the models, but the Florentine children with their gold sprinkled draperies, gold colored wings, and curling hair.

Pietro Cavallini.—In *Memoirs of the American Academy in Rome*, II, 1918, pp. 75-98 (35 pls.) STANLEY LOTHROP presents a richly illustrated study of the work of the Roman painter Pietro Cavallini. Cavallini was the most important figure in that Roman school which, turning to the study of classical sculpture and painting, succeeded in substituting a degree of reality and beauty for the emptiness and ugliness which Roman art had reached at the middle of the thirteenth century. It was to this school that Giotto owed his early inspiration rather than to the teaching of Cimabue. Among the important works included in Mr. Lothrop's study are the mosaics of Santa Maria in Trastevere, the fragmentary frescoes of the Basilica of Santa Cecilia, and frescoes in the church of San Francesco at Assisi, in the Sala dei Notari at Perugia, and in the chapel of the church of Santa Maria Donna Regina in Naples.

Angelo Bronzino and Ancient Art.—In *Röm. Mitt.* XXXIII, 1918, p. 45-63, (2 pls.) BERNHARD SCHWEIZER points out that the head of the Madonna in

Bronzino's Holy Family now in the Pitti Palace is almost an exact copy of the head of the Cnidian Aphrodite. The original sketch shows other antique influences in this painting. Bronzino seems to have been impressed by Lucian's description of perfect beauty.

An Altar-piece by Girolamo dai Libri.—In *B. Metr. Mus.* XV, 1920, pp. 137–138 (fig.) B. B(URROUGHS) describes the altar-piece by Girolamo dai Libri recently acquired by the Metropolitan Museum, and formerly in the Hamilton Palace collection near Glasgow. It represents the Madonna and Child seated beneath a laurel tree, with St. Leonard, St. Catharine, St. Augustine, and St. Apollonia. The painting has been frequently published, and is described by Vasari (Bohn's ed., Vol. V, 378–379).

Portraits of Raphael.—In *Rass. d'Arte*, VII, 1920, pp. 89–96 (pl.; 10 figs.) C. RICCI discusses, besides the paintings and engravings that have already been recognized as portraits of Raphael, a figure at the extreme left of the fresco of the Expulsion of Heliodorus. This figure is very similar in its principal characteristics to the undisputed portraits of Raphael, the best of which is the one in the School of Athens. But the most striking parallel is found in the picture of St. Luke painting the Virgin, in the Academy of St. Luke, Rome, which is attributed to Raphael and his pupils. The figure of the young man at the right here has always been looked upon as a portrait of Raphael. Especially when seen mirror-wise this is in feature, pose, and dress remarkably like the one in the Heliodorus composition. To be sure, the latter figure holds a paper on which his name is given as Giovan Pietro de' Foliatì. This, however, is painted in oil instead of fresco and the writing is not Raphael's; so that it cannot be considered as furnishing conclusive evidence.

Portraits of Piero della Francesca.—Tradition marks as portraits of Piero della Francesca the figure seen in full front among the kneeling group in the artist's Madonna della Misericordia in the Pinacoteca of Sansepolcro and a sleeping guard in the Resurrection in the same place. The Hercules in Mrs. Gardner's collection, Boston, has also been thought to represent the artist. A. DEL VITA in *Rass. d'Arte*, VII, 1920, pp. 109–112 (5 figs.), calls attention to another possibility, a figure in the scene of the Visit of the Queen of Sheba to Solomon in San Francesco at Arezzo. The last is most like the figure in the Misericordia composition and seems with it to be more important iconographically than the other two. The seventeenth century portrait of the artist by Santi di Tito (in the Francesco-Marini palace, Sansepolcro) shows features similar to those of the supposed self-portraits, but it is too late to furnish any certain evidence.

Pisanello Drawings.—In the continuation of her catalogue of the drawings by Pisanello in the *Codex Vallardi* in the Louvre M. KRASCENINNIKOVA (*L'Arte*, XXIII, 1920, pp. 125–133; 4 figs.) shows that in his studies of animals Pisanello is as much interested in the individual characteristics of his subjects as in his studies of men and women. The indication of type or species never satisfies him, and his manner of drawing, the quality of his pencil strokes, changes with the peculiarities of his subject. The catalogue is completed with a brief study of a miscellaneous series (*Ibid.* pp. 226–229).

Giovanni della Robbia.—The fourth of the series of books which A. MARQUAND is devoting to the study of the della Robbias is *Giovanni della Robbia* (xxiv, 233 pp.; 161 figs.). It furnishes a complete list of the works of the sculptor and a presentation of the pertinent documents. In both respects

there are important additions to previous contributions. Giovanni della Robbia is well known in America, for he is represented in many collections. Two of the most important examples in this country are the Resurrection in the Brooklyn museum (Fig. 7) and the Lamentation in Fenway Court, Boston (Fig. 8.).

Paintings by Bernini.—In *Rass. d'Arte*, VII, 1920, pp. 145–150 (7 figs.) A. MUÑOZ publishes some paintings that place Bernini in a high rank as a painter. The most important is a self-portrait in the collection of the Marchesa Incisa della Rocchetta, Rome. In the same collection is a painting of David with the head of Goliath, which is certainly by Bernini, and in the Borghese gallery are two others, a portrait of a boy, and a portrait of Bernini; the latter cannot be attributed to Bernini with so much certainty because of the superiority of its technique.

Two Paintings by Tintoretto.—In *Z. Bild. K.* XXI, 1920, pp. 207–208 (pl.; 2 figs.) A. L. MAYER publishes two hitherto unknown paintings by Tin-



FIGURE 7.—THE RESURRECTION BY GIOVANNI DELLA ROBBIA: BROOKLYN.

oretto. One, a Flagellation of Christ, recently appeared in German art trade and is a splendid example of the work of Tintoretto in about 1540, showing strong influence of Bonifazio and Schiavone. The other is a life-size portrait of a young man in the Gil collection at Barcelona, where it has been attributed to Titian. It could not have been painted before about 1570.

The Landscape of Tintoretto.—In *L'Arte*, XXIII, 1920, pp. 163–180 (9 figs.) M. PITTALUGA writes on the development of landscape art in the work of Tintoretto, beginning with the paintings in the Venice Academy, where the landscape is made to harmonize with the figures, continuing through the pictures of the upper room of the Scuola di S. Rocco, where the landscape and atmosphere assume more importance, and culminating in the paintings of S. Maria Egiziaca and the Magdalene in the lower room of S. Rocco, in which the figures are only accidental, and light and landscape are everything.

The Portrait of Pace Guarienti.—In *L'Arte*, XXIII, 1920, pp. 195–199 (2 figs.) E. TEA presents stylistic reasons for doubting the attribution to Paolo Veronese of the portrait of Pace Guarienti in the Museo Civico at Verona. It

seems possible that the key to the true authorship of the work is to be found in a cycle of paintings—among which the pala of S. Caterina at Bari is typical—that show characteristics of the Caroto brothers as well as of Paolo.

Leonardo's Followers in Milan.—Of the three artists, Bramantino, Solario, and Boltraffio, who best characterize the artistic tendencies in Milanese paint-

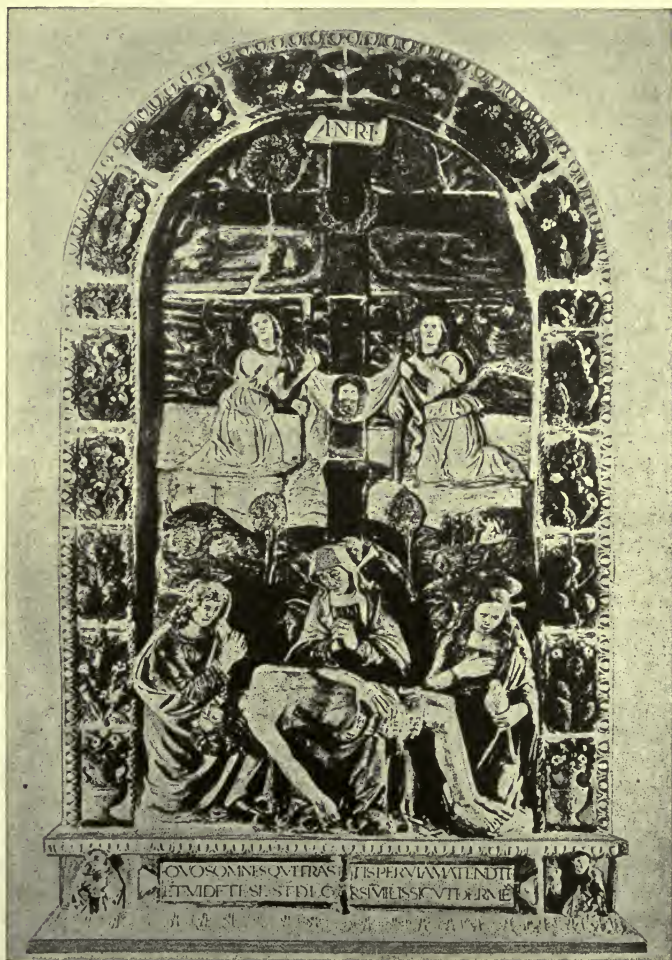


FIGURE 8.—LAMENTATION BY GIOVANNI DELLA ROBBIA: BOSTON.

ing after 1490, W. SUIDA discusses the second two in *Mh. f. Kunstw.* XIII, 1920, pp. 28–51 (14 figs.), tracing the characteristics of their work throughout their careers and giving chronological lists of the paintings that may be assigned to them, among which several previous attributions are changed.

Paintings that have formerly been falsely given to Boltraffio are shown to have been done by three different followers, forming a "pseudo-Boltraffio" group. The characteristics of a "pseudo-Boccaccino" are also studied and a drawing in the Venice Academy, formerly attributed to Leonardo, is given to this artist. Conjectures are made as to some works that may be by Salai, and, finally, a new artist is added to the Leonardo school, A. Pacchietti, whose signature is on a Head of Christ in the Czernin Gallery, Vienna. To him may also be attributed, through comparison with this signed picture, the Ambrosian copy of Leonardo's picture of John in the Louvre, which has been assigned to Salaino.

A Codex of the Acerba.—In *L'Arte*, XXIII, 1920, pp. 120-121 (6 figs.) P. D'ANCONA publishes a little-known codex of the *Acerba* of Cecco D'Ascoli in the Berlin print cabinet, the illustrations of which do not show the style of a follower of Piero della Francesca, as von Seidlitz has suggested, but are evidently the work of a Lombard artist with a style similar to that of such artists as Giovannino de'Grassi. He is a *ritardato*, for the date inscribed in the manuscript, 1475, is fifty years later than the style would lead one to suspect. The date and Lombard origin suggest the hypothesis that this is the very example of the *Acerba* which Leonardo had and which inspired some of his notes.

Michelangelo at Bologna.—In *Atti e Memorie*, IX, 1919, pp. 247-262 (pl.) I. B. SUPINO presents both stylistic and documentary evidence to prove that Michelangelo's work at Bologna was more comprehensive than has been admitted by recent critics, that for the Arca of St. Domenico he made not only the kneeling angel on the right and the St. Petronius (only part of the latter can be considered due to Michelangelo), but also the St. Proclus, which presages the famous David made for Florence in 1504.

Caravaggesque Attributions.—Three famous paintings universally attributed to Caravaggio are studied by M. BIANCALE in *Boll. Arte*, XIV, 1920, pp. 7-16 (5 figs.). Peculiarities distinct from those that characterize Caravaggio's work are pointed out and the paintings shown to be the work of Carlo Saraceni, who came under Caravaggio's influence after much vacillation among others. The paintings in question are the Rest in Egypt, in the Doria collection, Rome; the Madonna della Cappella Cavalletti, in S. Agostino, Rome; and the Denial of Peter, in the Certosa of S. Martino, Naples.

Quattrocento Painting in Rome.—The origins of the new movement in painting that appeared in and near Rome with the return of the holy see to the apostolic city at the time of the accession of Pope Martin V are studied by A. B. CALOSSO in *Boll. Arte*, XIV, 1920, pp. 97-114 (3 figs.). The artistic development of the most important painters working in Rome at this period, of Gentile da Fabriano, Antonio Pisanello, and Masolino has the same basis as the Gothic Renaissance in general, *i.e.*, a free interchange of theories and practices between various states and countries.

The Calumny of Apelles.—In *Rass. d'Arte*, VII, 1920, pp. 173-182 (pl.; 9 figs.), G. Q. GIGLIOLI discusses the representations of Calumny, inspired by Lucian's description of Apelles' painting, that have not already been noted—particularly by Richard Förster in his important monograph on the subject. The most interesting of the numerous pictorial renditions, aside from such important ones as those by Botticelli, Raphael, and Mantegna, are Federico Zuccari's sketch and painting, which show a greater originality of conception of the subject than any of the others.

Vicentino.—A study of the life and works of Valerio Belli, called Vicentino, is made by G. ZORZI in *L'Arte*, XXIII, 1920 (pp. 181-194; 9 figs.). The fine, accurate carving that characterizes the work of this sixteenth century artist is perfectly represented in the crystal cross of the Vatican Library, a casket in the Uffizi, and a cross in the Victoria and Albert Museum.

Giulio Romano.—Bibliographical material relating to the youth and student period of Giulio Romano is given by J. VOGEL in *Mh. f. Kunstw.* XIII, 1920, pp. 52-66.

Andrea Marchesi.—Documents concerning the activity of Andrea Marchesi da Formigine are published by L. FRATI in *L'Arte*, XXIII, 1920, pp. 230-240.

Comacina.—In *Rass. d'Arte*, VII, 1920, pp. iii-iv (2 figs.), G. I. FERRARI gives a short history of the Island of Comacina, lately given by the king of Belgium to the Italian State, and describes the monuments that remain there. The most important of these are the *canonica* of St. Eufemia, with parts of its basilica remaining, and the church of St. Maddalena di Ospedaletto of the eleventh century.

The Ancona of Tuili.—In *L'Arte*, XXIII, 1920, pp. 114-119 (2 figs.) E. BRUNELLI writes on the best of the three paintings that can be assigned to an anonymous Sardinian painter of the beginning of the sixteenth century. The painting in question is an *ancona* in the parish church of Tuili; the other two, at Birmingham and at Castelsardo, have already been published (*Ibid.* XXII, pp. 232-242). The three paintings are closely similar, but the greatest care has been lavished upon the central panel of the Tuili *ancona*, which represents the Madonna enthroned surrounded by angels.

Catalan Painters in Sardinia.—The Sardinian work of two Catalan painters, Raffaele Thomas and Giovanni Figuera is studied by C. ARU in *L'Arte*, XXIII, 1920, pp. 136-150 (14 figs.). Documents indicate the residence of the two artists at Cagliari through twenty-two months, February, 1455-November, 1456. The *ancona* of S. Bernardino in the Museo Nazionale of Cagliari is clearly one of those mentioned in documents and in it the work of the two artists is distinct. Both Flemish and Sienese influences are evident in the work. To the better of the two artists can be assigned a predella in the same museum, from the church of S. Lucifero, and to the other a painting formerly in the porta dell'Angelo. A follower of the school is responsible for a predella in Sanluri, Oratorio di S. Pietro.

SPAIN

Monuments of the Province of Burgos.—In *B. Soc. Esp.* XXVIII, 1920, pp. 65-71 (3 pls.; 3 figs.), V. LAMPÉREZ Y ROMEA describes several monuments of Burgos, including the church of Sta. María del Campo (fifteenth to sixteenth century); the sixteenth century church of San Juan, with fourteenth century tower; the church of Santiago in a decadent Gothic style; and the thirteenth century church of Villamorón.

Spanish Masters.—In *Mh. f. Kunstw.* XIII, 1920, pp. 88-90 (7 figs.) A. L. MAYER publishes several important hitherto unknown works by Spanish masters of the seventeenth century. An Adoration of the Kings in the Boross collection, Larchmont, N. Y., shows close resemblances to El Greco, and by

another pupil of that master, Mayno, is a Praying Jerome in the Björk collection. Three signed and dated works by Ribera are of special importance: a bust painting of Cleopatra, 1637, was owned by an English dealer in 1913; the Virgin with the sleeping Christ Child, 1642, in the collection of F. v. Schrenk-Notzing, Munich, is a proof of the fact that not all the artist's work was dark, but that light tones came more and more to predominate; the same is shown by the painting of a dwarf with a dog, 1643, in the Lederer collection, Vienna. A St. Jacob in Battle signed by Juan Carreno, 1660, in the Boross collection shows the strong influence of Van Dyck. Finally, three paintings are added to Zurbaran's account: a Christ at the Martyr's Block, with kneeling donor, 1620, in a Hamburg private collection; a Joseph's Dream, 1642, Madrid private collection, showing that as early as this the artist was already beginning to weaken under the influence of Murillo; and a child's portrait in the Ernst collection, Zürich, painted a few years later, and closely related to this.

FRANCE

A Limoges Cup.—In *B. Soc. Ant. Fr.* 1919, pp. 161-164, V. CHAPOT describes a Limoges cup, signed by Pierre Reymond (d. 1584). On the cover are represented Absalom and Joab. The scene on the interior of the cup is unusual: the meeting of Moses and Jethro (*Exodus*, xviii) in the desert.

BELGIUM AND HOLLAND

Rembrandt and His Circle.—A number of unpublished drawings in the Danzig Museum are described by H. F. SECKER in *Z. Bild. K.* XXXI, 1919, pp. 37-48 (6 figs.). They include one by Rembrandt—a seated old man with hat, similar to one in Vienna—several that are very closely related to Rembrandt, and one each by Pieter Lastman, Gerbrand van den Eeckhout, Samuel van Hoogstraten, and Abraham Furnerius.

Two Miniatures of the Sixteenth Century.—In *C. R. Acad. Insc.* 1920, pp. 311-315 Count DURRIEU discusses two miniatures found in the Book of Hours of the Library of Vienna, which is a fine example of the work of the Ghent-Bruges school of miniaturists. One is a portrait of James IV of Scotland, represented with his patron, St. James; the other of his wife, Queen Margaret, daughter of Henry VII of England. The figure of St. James is closely allied in style to the figures of the apostles on some detached leaves signed with the monogram HB in the Library at Cassel.

An Italian Prince Among Dutch Artists.—In *Rass. d'Arte*, VII, 1920, pp. 117-125 (7 figs.), G. I. HOOGWERFF writes on the sojourns of Cosimo III de' Medici in Holland in the middle of the seventeenth century. In his diary the prince has interesting comments on his visits to the studios of various important artists and there are a number of Dutch paintings now in Italy that were acquired by him.

The So-Called Maître de Flemalle.—In *B. Soc. Ant. Fr.* 1918, pp. 250-259 F. DE MÉLY publishes some hitherto unrecognized signatures on paintings attributed to the hypothetical Maître de Flemalle. The paintings which have been attributed to him are to be assigned to at least four masters; Roger van der Weyden; two hitherto unknown painters, named Bernhard and Kuhn; and the painter of the unsigned Descent from the Cross in Liverpool.

Rubens' Resurrection Altar.—In *Z. Bild. K.* XXXI, 1920, pp. 157–162 (4 figs.), H. KEHRER discusses Rubens' altar of the Resurrection in the Antwerp cathedral. Though his other altars there have been so much written about, this one is hardly known, and is not even mentioned in the monograph *Klassiker der Kunst*. An analysis of the work shows a combination of classical and Italian Renaissance influences in the cold, sculpturesque treatment of the figures. The angels on the outside of the wings betray their models very clearly. The coiffures are copied from the Apollo Belvedere; the angel on the left has taken over quite completely parts of Michelangelo's David, notably the right hand and arm, without any softening of the masculine quality; the one on the right is copied partly from the David and partly from the Lea of the Julius grave.

AMERICAN ARCHAEOLOGY

GENERAL AND MISCELLANEOUS

Alsea Texts and Myths.—Dr. Frachtenberg's personal contribution to the already existing knowledge of this hitherto little known American linguistic stock has been very great. The present volume (*Alsea Texts and Myths*, by LEO FRACHTENBERG, Bulletin 67, Bureau of American Ethnology, Washington, 1920, 304 pp. 8 vo.) is a collection of carefully recorded and translated texts made by him on the Siletz Reserve, Oregon. Some material in English obtained by Dr. Livingston Farrand is included. The Alsea form a subdivision of the Yakonan linguistic stock. The growing interest among philologists in American linguistics will find a ready field in the many well-prepared collections of texts like this. Mythologists, too, will find Frachtenberg's discussion of the Culture-Hero, Bear, and the Beaver, and his treatment of the explanatory element in Alsea mythology to be instructive. The tribe is now almost extinct; its language is known only to a few individuals.

Publications of the Museum of the American Indian (Heye Foundation).—The practice of listing publications of the Heye Museum in volumes and numbers has been discontinued with the completion of the last volume. The notes and monographs are to appear in the future as independent titles, each with its own index. The most important among recent publications of this series is Marshall H. Saville's, *Goldsmith's Art in Ancient Mexico* (1920; 264 pp.; 21 pls.; 10 figs.). Four plates in color greatly enhance the value of the book. The author has compiled all the available sources on the important subject of the goldsmith's art. He has placed in the hands of the archaeologist a work of reference, treating a metal age in America, which stands historically apart from any antecedent iron or bronze age. The processes of manufacture, of smelting, hollow-casting over a core of wax, gold filigree and mosaics which have caused Mexican goldsmiths' art to stand out as one of the high lights of Central American civilization are treated in the quotations from Cortés, Bernal and Juan Díaz, Martyr, Gomara, Duran and others. The inventories of precious objects of gold sent with consignments of treasures to patrons of the expeditions in Spain read like catalogues of objects which should be in modern museums but of which practically all have been lost or destroyed. The volume

capitalizes the sources of gold, uses of gold, Aztec goldsmiths and their work, gold jewels from Oaxaca, the Nahuatl region, the Tarascan region and the Totonacan region. Saville's volume dealing with an art which even the extravagant statements of the early writers did not exaggerate, reveals "the artistic temperament of the native Mexicans." "So far as the few specimens of gold from Mexico justify us in making a comparison with the same class of objects from other parts of ancient America, we are safe in placing these jewels . . . on a higher plane generally than those of the inhabitants of Chiriqui, Colombia, Ecuador and Peru" (p. 187). Two more monographs by the same author deal with the bibliography of Yucatan, *Bibliographical Notes on Uxmal* (Vol. IX; No. 3, 1921; 106 pp.; 7 pls.), and, *Reports on the Maya Indians of Yucatan* (Vol. IX; No. 3, 1921; 86 pp.). Transcripts of several little known ethnological accounts of the Mayas by Mendez, Aguilar and Hernandez are edited with notes. Vol. III, No. 3, *Hawikuh Bonework*, by F. W. Hodge (84 pp.; 46 pls.; 44 figs.) is a study of artifacts found in abundance in the ruins of Hawikuh, New Mexico, a Zuni site and one of the "Seven Cities of Cibola" of ancient Spanish times. The chief conclusion of interest in the bone objects from Hawikuh lies in the disclosed fact that, although exposed to contact with the Spanish for a period of about 130 years, the ancient industry of these Indians was no more modified by the products of civilization than their religion was affected by Christianity (p. 150). Several numbers in the series are devoted to the Indians of Manhattan Island. *New York City in Indian Possession*, by R. P. Bolton (Vol. XI; No. 7, 1920; 172 pp.; 3 pls.; map) is a historical account, and *Archaeological Investigations on Manhattan Island*, by A. B. Skinner (Vol. XI; No. 6, 1920; 90 pp.; 26 pls.; 19 figs.; 2 maps) is a discussion of sites, consisting of village sites and shell heaps. Based upon a comparative study of the objects from various parts of the city and adjacent territory, Skinner's conclusion is that the "natives were an offshoot from the typical Unami Delawares and not from the Wappinger group which held the east bank of the lower Hudson and extended eastward into Connecticut." They were under considerable Iroquois influence. He further concludes that the Hudson river was a boundary which divided the natives of Delaware culture from those of the New England area; a conclusion coinciding with the demarcations of dialect. *Native Copper Objects of the Copper Eskimo*, by Donald A. Cadzow (22 pp.; 11 pls.; fig.), is an interesting report on some specimens of native copper work obtained from a band of the little-known Copper Eskimo temporarily visiting Fort Norman in the MacKenzie district in 1919.

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***Books, pamphlets, and other matter for the Bibliography should be addressed to Professor SIDNEY N. DEANE, Smith College, Northampton, Mass.*

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A GROUP OF SUB-SIDAMARA SARCOPHAGI

IN the Morgan wing of the Metropolitan Museum in New York there is a fragment of a sarcophagus which represents an important link between late classic art and the Christian sarcophagi (Fig. 1¹). This fragment comes from Asia Minor where it was



FIGURE 1.—FRAGMENT OF SARCOPHAGUS RELIEF: NEW YORK.

purchased by an Englishman and carried to England, whence it found its way to this country. It represents the seated figure of a man turned to the right, holding in one hand a *volumen*. He is seated in front of a niche supported on spiral columns and behind his head is a conch shell with the hinge at the base as is customary in Eastern works as distinguished from Western.² The capital

¹ *B. Metr. Mus* XIV, p. 17.

² Weigand, *Jb. Arch. I.* 1914, pp. 63-67.

is composed of a rich acanthus which swells out beneath the superimposed double volutes. The spandril is filled with a luxuriant foliate design. The relief is flat, much flatter than the photograph shows and is not so much low relief as it is relief in one plane. This lack of plastic feeling is even more apparent in the treatment of the capital and the foliage in the spandril. Here the treatment is coloristic, the shadows are not cast by the leaves, but are produced by the use of the drill which in boring



FIGURE 2.—RELIEF IN BRITISH MUSEUM.

into the flat surface produces a pattern by shadow rather than by relieving the foliage against a plane.

To define the style and school of this relief we may compare a fragment in the British Museum (Fig. 2¹). The figure is in the same position as on the Metropolitan fragment and I need only point out the way in which he holds the *volumen* to illustrate the similarity that exists between them. Here the background is filled by a gable enclosing a conch carried on bits of architrave broken out over the supports. This architrave is carried on

¹ London, British Museum. Strzygowski, *Orient oder Rom*, p. 51, fig. 19.

behind the female figure to connect with the next niche and is treated in the coloristic manner of the Metropolitan example. The presence of the female figure, identified by the mask as Thalia, makes it possible to recognize the group as a poet and his muse.¹ This figure is also found on other sarcophagi from Asia Minor, namely the one from Selefkieh² and the one from Sidamara now in the Museum in Constantinople.³ The finest of these is the one from Sidamara and it was natural that the monuments found at a later date should be grouped about it and that the group thus formed should take the name of Sidamara sarcophagi.

Since 1901 when Strzygowski dedicated a chapter in his *Orient oder Rom* to this group there has been considerable interest in these late classic monuments. Reinach,⁴ Mendel,⁵ Muñoz,⁶ and Weigand⁷ have discussed and enlarged this group until today it stands well defined with between forty and fifty examples scattered throughout the museums of Europe and this country.

The Asiatic sarcophagi are of marble and large in size. Their distant ancestor in the general disposition of the figures was the sarcophagus of the Mourning Women⁸ and to this was adapted the architectural wall-decoration of the Empire consisting of a series of *aediculae* connected by an architrave broken out over the supports. The supports consist of colonnettes with spiral channels and capitals the distinctive feature of which is the double volute. The *aediculae* are crowned by a gable for the centre and by segmental arches for the sides which enclose beneath them a conch shell. In front of these *aediculae* and in the spaces between are the figures with the heads relieved against the entablature, a disposition characteristic of the group.

In considering the figures by themselves we find that they are not new to Greek iconography. The seated poet, for instance, recalls the Euripides relief in Constantinople and the Menander of the Lateran,⁹ as well as certain grave stelae; the Dioscuri and

¹ Reinach, *Mon. Piot*, IX, 1902, p. 200.

² Strzygowski, *op. cit.* p. 47, fig. 14.

³ Reinach, *op. cit.* pl. XVII.

⁴ Reinach, *op. cit.* p. 211.

⁵ *B.C.H.* 1902, p. 202; 1909, p. 329; *Musées Impériaux Ottomans, Cat. des sculpt. grecques, romaines et byzantines*, p. 312.

⁶ *B. Arch. Crist.* 1905, p. 79.

⁷ *Jb. Arch. I.* 1914, p. 72; also Strzygowski, *J.H.S.* 1907, p. 99.

⁸ Mendel, *Musées Impériaux Ottomans*, pp. 55, 57, 58, 60.

⁹ Cf. von Christ's *Gesch. der Griech. Lit.* II, 5th ed. Anhang, Nos. 14 and 15.

Artemis occupy a place near the end of a long line of such representations. But they are not copies of any monument that has come down to us; rather they are conceived in the classic spirit without the aid of exact prototypes.

Up to this point we have treated the Asiatic group as a unit; but as we examine the monuments in greater detail we find that the name Sidamara can no longer be applied to the whole group, but that the sarcophagus from Sidamara stands at the head of a division which differs from a group that Weigand localizes in Lydia.¹ This so-called Lydian group is marked by the spiky form of the capital as is seen on the sarcophagus from Sardis, dated about 190 A.D.²

Weigand using the capital as a criterion has shown that the Lydian group includes not only sarcophagi with gable and arch decoration, but others which have a simple frieze, an arcade, or a series of *aediculae* crowned with a broken-out horizontal entablature; in all these additional types the alternation of gables and arches, hitherto regarded as a necessary feature of the Asiatic sarcophagi, is replaced by other systems of decoration. So that we have an enlargement of the Lydian group by including sarcophagi which although they deviate from it in general layout, yet because of the peculiar treatment of the capitals must be included within it. Weigand has noted seven examples of this group. They are: the sarcophagus of Torre Nova in Rome (frieze), the Borghese sarcophagus also in Rome (arcade), a third in the Vatican (arcade), a fourth with figures reclining on the cover in the Torlonia collection in Rome (arcade), one in Athens with scenes from the Bellerophon myth (frieze), a sixth in the British Museum in London (horizontal entablature), and possibly a seventh in the Palazzo Mattei in Rome (horizontal entablature)³. What Weigand has done for the Lydian group, it is the purpose of this article to do for the Sidamara group. Just as the criterion of the Lydian group was the spiky form of the acanthus capital, so for the capital of the Sidamara group the most characteristic feature is a luxuriant and very coloristic acanthus pressed down

¹ Weigand, *op. cit.* 1914, p. 72.

² Sardis, H. C. Butler, *A.J.A.* 1913, p. 476, fig. 5.

³ Torre Nova, *Röm. Mitt.* XXV, 1910, p. 97; Borghese, Robert, *Sark. Rel.* III, taf. 38, No. 127; Vatican, Robert, *op. cit.* III, taf. 39, No. 130; Torlonia, Robert, *op. cit.* III, taf. 34-35, No. 126; Athens, Robert, *op. cit.* II, taf. 50, No. 138; London, Robert, *op. cit.* III, taf. 39, No. 131; Mattei, Robert, *op. cit.* taf. 43, No. 141.

and bowed out by the superimposed double volutes which are common to the whole Asiatic group. Now this capital reappears in the fragment in the Metropolitan Museum which has, as far as we can see, the luxuriant acanthus and the double volute of the Sidamara type, and this with its pronounced colorism would lead us to recognize in it another member of the group. But closer inspection shows that we have here an entirely new type, for instead of the customary *aediculae* we have a continuous arcade, with the archivolts resting directly on the capitals without the interposition of the usual piece of architrave. It is evident, then, that the Sidamara group, like that of Lydia, must be expanded to include examples like this, with characteristic Sidamara



FIGURE 3.—SARCOPHAGUS FROM SIDAMARA: CONSTANTINOPLE.

technique and motifs, but replacing the gable and arch facade with an arcade. The prototype for this arcade is, indeed, already found in the Sidamara sarcophagus itself, the rear face of which displays a pendant arcade of this character, without the colonnettes, but with the spandrels filled with the same luxuriant foliate design (Fig. 3¹).

But the Metropolitan Museum fragment is only one example of this new type, which we can call sub-Sidamara (because the figure style and capitals are obviously the same as those of the Sidamara group), and though their architectonic disposition is different from that of the Sidamara group as a whole, it is nevertheless already suggested by the pendant arcade on the back of the Sidamara sarcophagus itself.

¹ Reinach, *op. cit.* pl. XVIII.

Another and the most complete of the examples of the new type is in the garden of the Villa Mattei in Rome (Figs. 4, 5 and 6).¹ This sarcophagus shows the closest relationship with the back of the Sidamara example in the capitals and in the general disposition of the background. The third member of the group is a sarcophagus with figures of the Muses in the British Museum (Fig. 7).² Here the figures are treated in the same way as on the preceding sarcophagus and the background consists of the same arcade with foliate spandrils that we have found in the other members of



FIGURE 4.—SARCOPHAGUS IN VILLA MATTEI: ROME.

the sub-Sidamara group, but with this exception, that here the terminal supports are pilasters. The fourth example is in the church of S. Nicolo in Bari where, since the twelfth century, it has formed part of the tomb of Archbishop Elia (Fig. 8³). Here the background is treated in a slightly less coloristic manner than in the foregoing example, but the strongest affinity possible is found in the capitals and in the disposition of the arcade with its

¹ Rivoira, *Architettura Musulmana*, p. 138, figs. 115, 116; also Reinach, *Repertoire de Rel. grecs et romains*, III, p. 301.

² *British Museum Marbles*, Vol. X, pl. 44; also Reinach, *op. cit.* p. 485; also A. H. Smith, *Catalogue of Sculpture, British Museum*, III, p. 316, No. 2305.

³ Carabellese, *Bari, Italia Artistica*, Vol. 51, p. 122.

foliate spandril. The Metropolitan example is in the same line of development but with the tendency to colorism developed. The coloristic tendency which we have found so marked in the architecture does not attack the figures to so great an extent, and in this conservatism as well as in the figures themselves there is the greatest resemblance between the Sidamara and the Sub-Sidamara group. The seated figure of the Poet we



FIGURE 5.—SARCOPHAGUS IN VILLA MATTEI: END.

have seen on the London and Sidamara examples and it exists also on the sarcophagus from Selefkieh.¹ The philosophers of the Bari example, particularly the one to the left with his head turned

and his right arm thrown across his body, resemble the philosophers on the side of the Selefkieh sarcophagus where these attitudes are found again though the features are changed.² The Muses as seen on the sarcophagus from the Villa Mattei are found again on a Sidamara example at



FIGURE 6.—SARCOPHAGUS IN VILLA MATTEI: END.

¹ Strzygowski, *op. cit.* p. 47, fig. 14.

² *Ibid.* p. 57, fig. 21.

Brussa¹ and we have already become acquainted with the Thalia of the London fragment.²

The sub-Sidamara group thus formed of four examples has fallen together without much effort, but this is not the only group that is derived from Asiatic sources. My friend Mr. Morey will shortly have something to say about the ramifications of this influence in a monograph he is preparing on the whole Asiatic group so that here we will consider only one of the offshoots. This is represented by two sarcophagi, one found in the cemetery of Concordia,³ the other preserved in the Villa Ludovisi.⁴ These two examples mark the fusion of the types as represented by the front and back of the Sidamara sarcophagus; the gable and arch



FIGURE 7.—SARCOPHAGUS RELIEF: NINE MUSES: BRITISH MUSEUM.

come from the front, while the developed foliate design is seen in full growth only on the back of the Sidamara sarcophagus and on all examples of the sub-Sidamara group.

It has generally been considered that the group of Lydian sarcophagi was produced earlier than the Sidamara, because, to it belong the only two of the Asiatic sarcophagi, *i.e.* the sarcophagus from Sardis and the one from Melfi, which have hitherto been securely dated in the second century. Whether this relative chronology holds good for their allied groups cannot be stated definitely,

¹ Mendel, *B.C.H.* 1909, p. 330, fig. 41.

² British Museum, Strzygowski, *op. cit.* p. 51, fig. 19.

³ Garrucci, Vol. V, pl. 362, 1.

⁴ Garrucci, Vol. V, pl. 362, 2.

but we have one monument in each group to which we can assign an approximate date. Robert¹ has shown that the heads of the figures which recline on the Torlonia sarcophagus are not the original ones, and that the head of the woman as shown on a drawing before the substitution was made has the characteristic headdress of the first years of the third century. This, although it does not establish a *terminus a quo*, gives us an indication of the probable period during which the sub-Lydian group was produced, namely the first part of the third century. The second sarcophagus to which we may assign an approximate date belongs to the other group. The Ludovisi sarcophagus represents one



FIGURE 8.—RELIEF FROM TOMB OF ARCHBISHOP ELIA: BARI.

of the phases of the sub-Sidamara group and both because of the extreme colorism of the style, and because of the lack of unity in the architectonic decoration undoubtedly represents a later development. The face of the sarcophagus bears an inscription containing the word *DEPOSSIO* which De Rossi² has shown was used during the middle of the third century and was displaced, in Rome at least, in the early fourth century by *DEPOSITVS*. For the four members of the sub-Sidamara group we have no certain date, but included as they are between the Torlonia sarcophagus and the one in the Villa Ludovisi we may assume that they were produced in the second or third quarter of the third century.

¹ Robert, *op. cit.* III, p. 145.

² De Rossi, *Roma Sotterranea*, II, p. 308.

These four sarcophagi of the sub-Sidamara group are only an indication of the ramifications of Asia Minor workmanship. Weigand has materially enlarged the "Lydian" group; I hope the present paper will show that the Sidamara group need no longer be confined to the examples displaying the gable and arch facade, and that further inquiry and observation of the essentials of technique and style will enable later students to increase the list of the sub-Sidamara type as well. It is important to note that in tracing the subsequent influence of this Asia Minor sarcophagus style, the gable and arch system is no longer the criterion, since we can see that the Asiatic sarcophagi afforded also a prototype for the arcaded sarcophagi so popular in the fourth century.

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ATTIC BUILDING ACCOUNTS

V. SUPPLEMENTARY NOTES

A. THE PARTHENON¹

IN some recent discussions of the chronology of the Parthenon, and of the works of Phidias, my arrangement of the building accounts of the Parthenon has been followed;² it seems advisable, therefore, to take this opportunity to publish some readjustments which have been necessitated by later discoveries.

Dr. Bannier and Dr. Fimmen, revising the Attic quota lists of the Delian Confederacy,³ have changed some of the evidence by which I reconstructed the first column of the reverse of the stele. Formerly the only position available for fragment G, on which the demotic of the secretary to the Hellenotamiae is 'Ραμνόςιος or Χαγνόςιος, was year IX;⁴ now, however, years X and XI are also open, the secretaries with the demotics 'Αχαρνεύς and Κεραμεύς having been removed to years XIII and XIV. Year XI must still be eliminated, being completed by fragments P+O+C; but year X is preferable to year IX, because the expenses on fragment B, which must be associated with G, are exactly like those of years XI to XIV, dealing only with sculpture; in my former arrangement these accounts for sculpture were interrupted by fragment K. As for fragments K and L, hereby displaced, the former must be assigned to year VIII, while the latter, as formerly, immediately precedes G and, therefore, appears in year IX. Separating G from H, we are now able to read the latter in a more natural manner, with ἐργ[αμμάτευε] and

¹ A few additions to the accounts of the Propylaea are reserved for the publication of the monograph dealing with that structure.

² E.g. Frickenhaus, *Jb. Arch. I.* 1913, pp. 351-352; Collignon, *Parthénon*, 1914, pp. 48-50; Heberdey, *Alt-Attische Porosskulptur*, p. 236.

³ *Ath. Mitt.* 1913, pp. 228-238. For a general study of the quota lists taking into account the new discoveries, see Wing, *Ann. Report Am. Hist. Assn.* 1916, I, pp. 287-297.

⁴ *A.J.A.* 1913, pp. 68-69.

Χσν[πεταδον] in lines 40 and 41. The effect of these changes on the chronology will appear in the summary.

Three new fragments have been added to the inscription, one (R) by Professor Groh,¹ and two (S and T) by Dr. Keramopoulos,² raising the total number to twenty. All three fragments, as Dr. Keramopoulos has proved, join others which I had previously located in the stele. A careful examination will show that these, too, demand a readjustment of the chronological scheme.

Fragment R was correctly located and dated by Professor Groh. For, on the reverse, R fits against the bottom of C, and Q against the bottom of R, confirming the location which I had formerly assigned to Q, but raising it by twelve lines (year XII containing only twenty-one lines, being the first of the short accounts like that of year XIV). Then on the obverse the first preserved line of R comes 0.378 m. below the top of the stele, even with line 22 on the obverse of E; therefore the lines on the obverse of R should be numbered 22 to 35; and since line 33 of R is the same as the first line on the obverse of F, the latter must also be numbered 33, as I formerly calculated.³ In lines 34 and 35, which are continued from F, there were nineteen or twenty letters before *hêi* and *ido*; but the phrase 'Επὶ τῆ[s] τρίτες ἀρχῆ[s] suggested by Keramopoulos would occupy only seventeen spaces, and the restoration of the archon's name only eighteen, besides being contrary to the usage of years II to X (when the archons were not mentioned) and allowing no space for the first secretary of the senate. In line 34, therefore, I retain Groh's reading, 'Επὶ τῆ[s] δευτέρας ἀρχῆ[s], renouncing my theory of the omission of year II, for reasons given below.⁴

¹ *Sborník Prací Filologických*, Prague, 1913, pp. 225-227 (the obverse only); this had been published, but not identified, by Philadelpheus, *Πρακτικά*, 1910, p. 124.

² *Εφ. Ἀρχ.* 1914, pp. 197-206, publishing also for the first time the reverse of R.

³ Keramopoulos revises my numbering on the obverse by three lines, making the second prescript begin in line 37 instead of 34 (*op. cit.* pp. 199-200). But this is purely a question of measurements, and after repeated tests, both independently with F, and with the additional evidence of R, I must continue to uphold my original numbering.

⁴ I cannot recognize the Euthemon and Stratocles of *I.G.* I, 296, in our secretary E. and epistates Στρατ. . .; nor does Keramopoulos' suggestion seem probable, that this was a central controlling board which was engaged simultaneously in the erection of other buildings.

The surplus of more than 200,000 drachmae in ll. 41-42 Keramopoulos

Fragment S, of the obverse, which fits against the back of Q,¹ begins with line 42 (as located by F) and ends with 52. Fragment T, also of the obverse, joins I. This renders impossible the association of I with N, which Cavaignac had suggested and Keramopoulos, like myself, accepted; for T shows that at the end of year IV a surplus of more than $13\frac{2}{3}$ drachmae was handed over to the succeeding board, while on fragment N there is no surplus at all except the gold staters.

Not only has the obverse of N been displaced, but on account of the raising of Q to a higher level the letters OΞ, on the reverse of N, cannot be placed as low as line 106; since the payment to sculptors in year XII appears in the seventeenth line of the annual account (line 49), we may suppose that it occupied the seventeenth line of the similarly arranged year XIII (line 71). The bottom of this line 71 would be 1.11 m. below the top of the stele;² four more lines are sufficient to complete this year's account; it seems, therefore, that the total length of the column was only seventy-five lines, or about 1.17 m. Such a location of N agrees with the evidence from the obverse, where the top is 0.13 m. higher than the letters OΞ (of the reverse), coming, therefore, 0.98 m. below the top of the stele, or 0.10 m. below the bottom of line 52 (in S); numbering the lines on N 59 to 72, the beginning of a year appears in line 70, so that the preceding year would have contained thirty-five lines (34 to 68), practically the average number. On the narrow edge of N, furthermore, the blank surface appears at a distance of only 0.025 m. below the bottom of line 71 of the reverse, *i.e.*, 1.135 m. below the top of the stele; as the first line of year XV is 0.58 m. below the top, with the spacing 0.0165 m. we have a maximum of thirty-three short lines in this year, as compared with forty-four in year XIV.

The fact that the column containing years XI to XIII had a length of only seventy-five lines is of considerable importance. The accounts of years XIV and XV, if they had not been written considers to have been a permanent emergency fund, which was handed over each year like the gold staters, because of the coincidence that another large sum (between 200,000 and 500,000 drachmae) appears as a surplus in the seventh year; but a difficulty with this theory is that on fragment N (at the end of this second year, as will appear) there was no surplus except the gold staters.

¹ Not against R, as Keramopoulos states (*op. cit.* p. 198).

² The bottom of line 56, in Q, is 0.875 m. below the top of the stele, and the spacing of the lines is 0.0156 m.

on narrow edges, would have occupied only twenty-four and eighteen lines respectively, a total of forty-four lines (including the intervals between the accounts). If the stele had been 2.04 m. high, as I estimated from Column I,¹ it seems incredible that years XIV and XV would have been relegated to the narrow edges; for the forty-four lines could have been inscribed below year XIII, yet leaving an empty space of 0.185 m. at the bottom,² as compared with 0.088 m. and 0.195 m. below two columns of the obverse. The natural inference is that the stele was not high enough to allow even the twenty-four lines for year XIV; that is, it was less than about 1.60 m.

Under these circumstances, it becomes impossible to place fragment I at the bottom of Column I of the obverse, where I was obliged to locate it because I had no precedent for a stele with as many as three double columns. Now, however, we have such precedent in the accounts *I.G. I*, 284-288, tentatively assigned to the Athena Promachos³; and we need not hesitate to restore three double columns for the Parthenon, fragment N coming near the bottom of the first, while T+I and M form the actual bottoms of the second and third columns respectively. This in turn relieves the congestion in the first four years, which formerly required the omission of year II, and in line 34 we are able to restore *δευτέρως*, which better fills the space between fragments F and R. The peculiar formula in lines 39 to 40 can still be interpreted as emphasizing the fact that the under-secretary was the same as in the preceding year. The reason for the double contribution from the treasurers of Athena in a single year (lines 45 to 50)⁴ still remains obscure.

A new examination of the fragments in the Museum has confirmed the rearrangement with three double columns. A straight diagonal crack which at present forms the left edges of L and G, and the right edge of B, on the reverse,⁵ appears also on fragment J of the obverse, at the lower right corner, in such a way as to oblige us to place it immediately above the obverse of G. Fragment J does not actually touch the top of G or the back of L,

¹ *A.J.A.* 1913, p. 77.

² *I.e.* $1.17 + 44 \times 0.0156 = 1.855$ m.; and $2.04 - 1.855 = 0.185$ m.

³ See above, pp. 118-129.

⁴ *Εφ. 'Αρχ.* 1914, p. 205.

⁵ This crack is a final proof that L, G, and B, which do not come into actual contact, should be grouped as I had represented them.

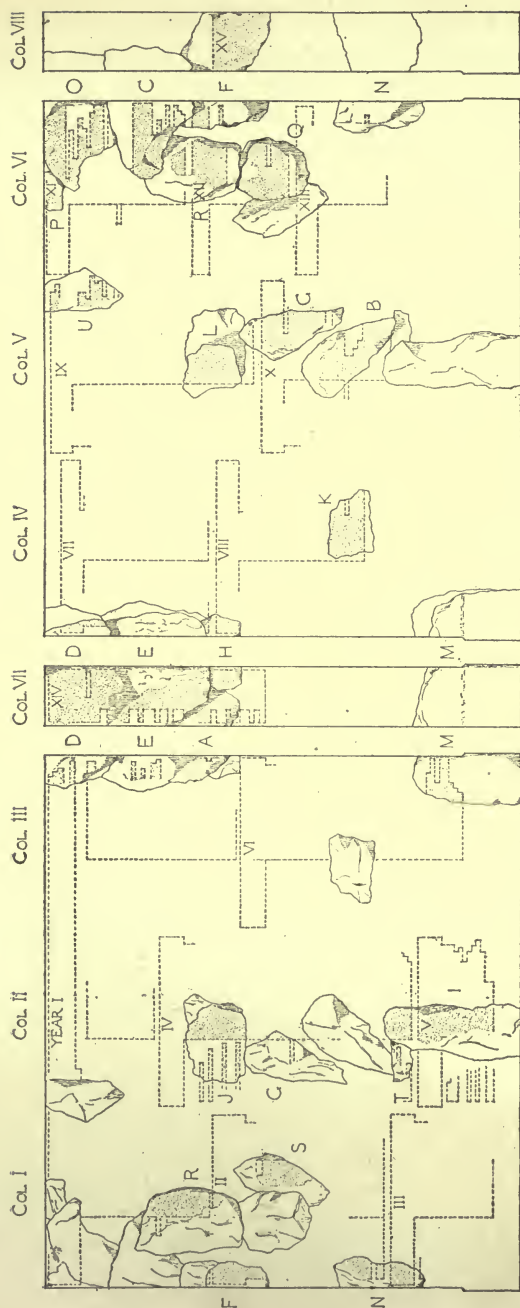


FIGURE 1.—THE BUILDING ACCOUNTS OF THE PARTHENON.

but there can be no doubt of the connection.¹ The obverse of G must, therefore, be assigned to year IV, to which J belongs, as we know from its contents. Assembling the group B, G, I, J, L, and T, it appears that between the last line of J and the first of G (obverse) four lines must have intervened (the receipts of year IV covering, therefore, twenty lines); and between the last line of G (obverse) and the first of I exists a gap of at least eighteen lines (the expenses of year IV covering, therefore, at least twenty-five lines). With the obverse of G thus located in year IV, the reverse would appear (if my former arrangement of the stele were to be retained) in year XIII, a position from which it is excluded by fragment Q and by the fact that the demotic of the secretary to the Hellenotamiae in year XIII was 'Αχαρνεύς. But in the revised arrangement, with G coming between J and I near the bottom of the middle column of the obverse, G+B would appear on the reverse likewise near the bottom of the middle column, immediately preceding year XI at the top of the last column; the date is, therefore, year X, as we had ascertained from the contents of these fragments.

Only by this rearrangement, furthermore, can we obtain place for a new fragment of the stele, U, which raises the total number of fragments to twenty-one.² It preserves the reverse face and top of the stele, and contains the beginning of an annual account. The first receipt of the surplus occurs in line 8 (0.113 m. below the top) and so does not agree with Columns IV or VI; therefore we must place fragment U in Column V, where it forms the beginning of year IX, reading as follows:

Ἐπὶ τῆς ἐνάτης ἀρχῆς ἡεὶ ἐγραμμάτευε.]ΟΞ
τῇ βολῇ πρῶτος ἐγραμμάτευε: Περγ]ΞΕΘΕΝ

5

ἐπιστάται ἡοῖς Ἀντίκλες χσυνεγραμμάτευε]
τούτοις λῆμματα τῷ ἐνιαυτῷ τούτῳ τάδε]

10

παρὰ τῶν προτέρων ἐπιστ]ΑΤΟΝ
χρυσὸ στατῆρες Λαμφσακ]ΕΝΟΙ
χρυσὸ στατῆρες Κυζικε]ΝΟΙ
παρὰ ταμιδῶν ἡοὶ τὰ τῆς θ]ΕΟΕΤΑΜΙΕΥΟΝ

¹ The crack is of a peculiar nature, with an offset at a depth of about 0.04 m. from the plane of the obverse.

² Fragment U, unpublished, is in the Epigraphical Museum.

hoîs ἑγγραμμάτευ] √ / [κ] ΙΑΔΕΞ
 παρὰ Ἡελλενοτοσμιδὼν hoî] ΞΕΡΛΟΦΙΛΟΣ
 ἑγγραμμάτευε]ΟΣ
 15 παρὰ ταμιδὼν Ἡεφαιστικῷ] ΑΓΟΛΑΥΡΕ[ιο
 τῷ π] ΕΝΤΕΜΕΡ[ὸν
]ΕΤ
 18

The item to which ll. 15–16 refer is obviously the same as that entered in the accounts of the Propylaea, Column III, ll. 14–15.¹ The number of spaces before ἀπὸ in line 15 of the Parthenon stele is the same as the number in line 14 of the Propylaea account; therefore we may restore Ἡεφαιστικῷ in the Parthenon account and, reciprocally, √[av]P[είο in that of the Propylaea.² We are certainly concerned with one of the Laurium mines, which were usually named after divinities,³ such as Aphrodisiacum, Apolloniacum, Artemisiacum, Athenaiïcum, Demetriadum, Dionysiacum, Dioscuricum, Herm. icum, Pandrosiacum (?), and Poseidoniacum.⁴ And in fact we actually learn of a mine called the Hephaestiacum.⁵ Apparently the state's share of the profits of this mine, or rather five-sixths of the income (if we may so interpret τῷ πέντε μερῶν in the next line),⁶ were used for building purposes. It is probable that the same entry is to be restored in year III (Col. II, ll. 44–45) of the Propylaea account, where we have the letters ΙΟΜΙ[έντε μερῶν].⁷ There is sufficient space to insert it also in years I (Col. I, ll. 8–15), II (Col. I, ll. 60–62), and V (Col. IV, ll. 9–18) of the Propylaea accounts; no such entry occurs in the Parthenon accounts of the corresponding period 437–432 B.C. For the preceding decade, apart from the known entry in year IX of the Parthenon, it is possible

¹ A.J.A. 1913, p. 396 (on p. 384 we should read "treasurers of the Hephaesti(a)cum.")

² The fourth letter, which I formerly read T, seems rather to be P.

³ Ardaillon, *Mines de Laurion*, pp. 179–180; Roberts and Gardner, *Greek Epigraphy*, II, p. 312; Oikonomos, *Ath. Mitt.* 1910, p. 295.

⁴ I.G. II, 780–782 b; *Ath. Mitt.* 1910, pp. 274–322.

⁵ I.G. II, 782 b, 14; the second α is certainly omitted in the Propylaea account, Ἡεφαιστι(α)κῷ.

⁶ Possibly μέρος has the sense of ἀπονομή, implying that the *epistatae* received five shares of the many into which the state's income from the mines was divided (see Ardaillon, *op. cit.* pp. 197–198).

⁷ A.J.A. 1913, p. 393.

to restore it also in year X;¹ and it may well have appeared every year, since the receipts of years I, III, VI, VII, and VIII are completely lost, and those of years II, IV, and V contain sufficient space for such an item.

I now arrange the stele with eight double columns, three on each face and two on the narrow edges (Fig. 1). Since Column I included the beginning of year III, and Column II had the first part of year V, and since these two columns were probably of equal length (in neither case concluding a year's account), we may estimate that each contained ninety lines. Then Column III would have only eighty-three lines, allowing no space for year VII, which must be assigned to the reverse. On the reverse it is probable that Columns IV and V each contained the accounts of two years; each begins with an annual prescript, and we found that year X appeared at the bottom of Column V. And we know that in Column VI were three shorter accounts. The total height of the stele becomes 1.60 m., and the width 1.80 m.

Having attempted, in my previous article on this subject, to give a consecutive reading of all the extant fragments,² I now summarize all the later additions³ and revisions, including the new numbering of the lines.

OBVERSE

Prescript, year I

- 1- 6. D gives the ends of the lines; with the increase in the width of the stele to 1.80 m., each line would have contained a maximum of 90 letters, spaced 0.019 m. on centres (I had formerly estimated 58 letters), making my earlier suggestion impossible.

Column I

- 7-22. Receipts; R giving the last line . . EN . .
 23-33. Expenses; R+F, as restored by Keramopoulos, who numbers them 26-36; in 25, read [ογιας Πεντέλειθεν; in 31, restore [$\Delta \Delta_{\text{M M}}$. . .
 34-40. Prescript, year II; F+R, as follows: 34, ΕΠΙΤΕ[*δευτερασάρχης* HEIE[. *εγραμματοε;* 35, ΗΑΛΑ[*ευστειβολειΑντ*]ΔΟ[*ροσπ-ροτοεγραμματοε;* 36, ΞΤΡΑΤ[. ; 37, ΞΑΛΑΜ[. ; 38-40 as in my previous publication.
 41- ? Receipts; F+S, as follows: 41, $\Delta \Delta_{\text{M M}}$ [. — — *παρελαβομενπατα-ονπροτερ;* 42, *ονεπιστατο*]N; 43-52 as restored by Keramopoulos, who numbers them 45-54.

¹ Col. V, ll. 60-61 (end of fragment G): *παρὰ ταμιδὺν* Ηεφαί, ΞΤΙΙ [*ὁ ἀπὸ Λαυρέου, and τ*] ΟΝΓ [*έντε μερδν*; I had formerly suggested *ἀργυρίο* *πραθέντο*] ΞΤΙΙ [*ἐ τούτο, and σταθμ*] ΟΝΓ (A.J.A. 1913, pl. III).

² A.J.A. 1913, pl. II, pp. 66-67, pl. III-IV, pp. 74-76 (fragments A-Q).

³ Referring to Keramopoulos, Έφ. Άρχ. 1914, pp. 198-201 (fragments R-T), and to pp. 238-239 above (fragment U).

- ?-68. Expenses; N gives parts of 59-68 (my former I, 90-99, omitting item column).
 70-74. Prescript, year III; N gives the beginnings of 70-72, as follows: 70, ΕΠΙΤΕ[στριτεςαρχησει . . . ; 71, . . . ΕΥ[στειβολει . . . ; 72, . . . Π . . .
 75-90. Receipts.

Column II

- 7- ? Receipts.
 ?-22. Expenses.
 24-28. Prescript, year IV.
 29-48. Receipts; J+G; J gives 29-41 (my former I, 73-85; in 40, the preserved figure is M, not X), and G gives 45-48 (my former II, 35-38).
 49-73. Expenses; G+T+I; G gives 49 (my former II, 39), I gives items of 68-73 (my former I, 94-99), and T gives ends of sums in 71 and 73 (Keramopoulos).
 75-79. Prescript, year V; I as in my previous publication (I, 101-105, omitting N).
 80-90. Receipts; I as in my previous publication (I, 106-116), with the following emendations: 80, restore Δ†††††; 81, read Λαμ; 85, restore [ιονηοιτατεςθεοεταμεινον]; 87, insert *hois*.

Column III

- 7- ? Receipts; D+E give the ends of 8-9 and 17-22 (my former II, 8-22).
 ?-36. Expenses; A gives the ends of 30-35 (my former II, 30-35).
 38-42. Prescript, year VI (approximate location).
 43- ? Receipts.
 ?-83. Expenses; M gives the ends of 76-83 (my former II, 102-109).

REVERSE

Column IV

- 4- 8. Prescript, year VII; D as in my previous publication (III, 4-8), restoring *hēβδομες* instead of *ογδοες*.
 9- ? Receipts; D gives the sums in 9-15 (my former III, 9-15).
 ?-36. Expenses; H locates the last line (my former III, 36).
 38-43. Prescript, year VIII; H gives the beginnings of 38-41, as follows: 38, ΕΠΙ[τρεσογδοεςαρχησει . . . ; 39, ΠΡΟΒ[αλσιοςτειβολει . . . ; 40, ΕΛΡ[αμματευε . . . ; 41, ΧΞΥ[πεταον
 44- ? Receipts.
 ?-90. Expenses; K gives 63-70 (my former III, 94-101).

Column V

- 2- 7. Prescript, year IX; U, as given above.
 8-30. Receipts; U contains 8-18, as given above.
 31-47. Expenses; L+G (my former III, 20-36).
 49-54. Prescript, year X; G as in my previous publication (III, 38-43, omitting H); in 49, read [Επιτεςδεκατεςαρχησει]ΦΙΛΟΞΕΛΡ [αμματευε.
 55-66. Receipts; G+B (my former III, 44-55); read 60, παραταμιονΗεφαι ΞΤ††[οαποΛαυρειο]; 61, τ†ΟΝΠ[εντεμερον.
 67-81. Expenses; B gives 67-77 (my former III, 56-66).

Column VI

- 1- 4. Prescript, year XI; P+O (my former IV, 1-4).
 5-16. Receipts; O (my former IV, 5-16).
 17-31. Expenses; C+R (my former IV, 17-31, with R in the last three lines as shown by Keramopoulos).
 33-35. Prescript, year XII; R+F, as restored by Keramopoulos; but divide $\delta\omicron/\delta\epsilon\kappa\alpha\tau\epsilon\varsigma$ between 33-34, place $\epsilon\pi\iota$ in 35, and read $\text{Αθηναιοί}, \Sigma$.
 36-40. Receipts; R+F, as restored by Keramopoulos.
 41-53. Expenses; R+Q; R gives the first three lines (as restored by Keramopoulos), and Q gives 44-53 (my former IV, 56-65).
 55-57. Prescript, year XIII; Q (my former IV, 67-69); read Αντιστοχίδο .
 58-62. Receipts.
 63-75. Expenses; N gives the end of 71 (my former IV, 106).

RIGHT EDGE

Column VII

- 1- 9. Prescript, year XIV; D (my former V, 1-9).
 10-26. Receipts; D+E (my former V, 10-26).
 27-44. Expenses; E+A+H (my former V, 27-44).¹

LEFT EDGE

Column VIII

- 1- 9. Prescript, year XV; F (my former VI, 1-9).
 10- ? Receipts; F gives 10-11 (my former VI, 10-11).
 ?-33. Expenses.

On account of the numerous chronological changes involved, it seems advisable to reprint the historical summary which I formerly published,² as follows:

Year I, 447/6 B.C.; Timarchides archon, Diodorus of Paeonidae secretary to the Hellenotamiae. The Parthenon begun with Ictinus and Callicrates as architects. The famous gold staters were already in the treasury, where they remained for the fifteen years.³ Payments were made for quarrying and transporting marble (though not yet for working it), for wages of carpenters and laborers, and for salaries of the *epistatae*, architects, and secretaries.

Year II, 446/5 B.C.; Callimachus archon, (Ant)idorus (?) first secretary to the senate, E—— of Halae secretary to the *epistatae*, Execestus of Athmone to the treasurers of Athena.

¹ The location of fragment H, fitting below A+E, as determined in my previous article, is correct, though at one period (*A.J.A.* 1913, p. 388, n. 1) the error in the word $\kappa\alpha\tau\alpha\mu\epsilon\nu\iota\omicron\iota\varsigma$ (*ibid.* p. 75), and the condition of the letters on the reverse, so enlarged by corrosion as to resemble those on the obverse, inclined me to doubt this attribution.

² *A.J.A.* 1913, pp. 77-80.

³ Cf. *J.H.S.* 1914, p. 277.

Year III, 445/4 B.C.; Lysimachides archon, Eu—— secretary to the Hellenotamiae.

Year IV, 444/3 B.C.; Praxiteles archon, Strombichus of Choleidae secretary to the Hellenotamiae. The earliest extant notice of the contribution of the ἀπαρχή (then 42,675 dr. 5 ob.); Pericles accused by Thucydides of the misuse of the Delian funds; the charge dismissed and Thucydides ostracized.¹ The new fleet of triremes finished and the surplus money (90,000 dr.) turned over to the Parthenon. Wood purchased, probably for scaffolding.

Year V, 443/2 B.C.; Lysanias archon, ——os first secretary to the senate, Timotheus annual secretary to the *epistatae*, Anticles permanent under-secretary,² Andr—— secretary to the treasurers of Athena, Sophiades of Eleusis to the Hellenotamiae. The middle long wall finished by Callierates, and the surplus money devoted to the Parthenon.

Year VI, 442/1 B.C.; Diphilus archon, Anticles under-secretary to the *epistatae*, Chalceideus of Melite secretary to the Hellenotamiae. The columns channeled.

Year VII, 441/0 B.C.; Timocles archon, —— of Ph—— secretary to the *epistatae*, Anticles under-secretary.

Year VIII, 440/39 B.C.; Morychides archon, —— of Probalinthus secretary to the *epistatae*, Anticles under-secretary, Sosis-tratus of Hybadae secretary to the Hellenotamiae. The doors of the *naos* set in place (?).

Year IX, 439/8 B.C.; Glaucinus archon, Anticles under-secretary to the *epistatae*, —— of Laciadae secretary to the treasurers of Athena, Ergophilus to the Hellenotamiae. The only preserved entry of the receipt from the Hephaestiacum silver mine. Ivory bought, and silver ornaments made, for decorating the doors; payments to woodworkers and gilders (probably for the ceiling, the latter, perhaps, also for the marble mouldings). The marble now brought to the Ergasteria is probably to be in readiness for the pediment sculptures.

Year X, 438/7 B.C.; Theodorus archon, ——philus secretary to the *epistatae*, Anticles under-secretary, —— of Rhamnus (or

¹ The appearance of the word *Ἀθελαιος* whenever the archon's name is given in these records signifies that the documents were not purely local, and implies that the allies had formally destined the ἀπαρχή as their contribution toward the rebuilding of the Parthenon. I owe this suggestion to Professor W. S. Ferguson; a similar statement was made by Foucart (*Rev. de Philologie*, 1903, pp. 10-11; cf. Collignon, *Parthénon*, 1914, p. 41).

² The name of Anticles may have appeared also in the four earlier prescripts.

Hagnus) secretary to the Hellenotamiae. The treasurers of Athena cease to contribute to the Parthenon, devoting all their efforts to the completion of the statue of Athena Parthenos. The statue completed by Phidias and dedicated at the Panathenaic festival; its surplus material turned over to the Parthenon by the *epistatae* of the statue, and part of the gold sold to assist in paying for the carving of the pediment sculptures (which were probably likewise the work of Phidias and his assistants). The Parthenon virtually completed, and surplus wood from the scaffoldings and roof sold. The pediment sculptures begun and work henceforth confined to them.

Year XI, 437/6 B.C.; Euthymenes archon, Peithiades first secretary to the senate, Anticles acting secretary to the *epistatae*. The Propylaea begun, whereupon the Hellenotamiae and the treasurers of the Hephaestiacum mine cease to contribute to the Parthenon, and the treasurers of Athena, instead of resuming their contributions for the construction of the Parthenon (now that the statue had been completed), likewise divert their funds to the Propylaea. Contributions from private individuals, hitherto given for the statue, now distributed between the Parthenon and the Propylaea. Surplus ivory and tin sold.

Year XII, 436/5 B.C.; Lysimachus archon, Anticles appointed permanent secretary to the *epistatae*, ——— of Aexone secretary to the Hellenotamiae. Funds received from the agents of some holy precinct.

Year XIII, 435/4 B.C.; Antiochides archon, ——— as first secretary to the senate, Anticles secretary to the *epistatae*, Thoinilus of Acharnae to the Hellenotamiae.

Year XIV, 434/3 B.C.; Crates archon, Metagenes first secretary to the senate, Anticles secretary to the *epistatae*, Crates of Lamptrae to the treasurers of Athena, Protonicus of the Ceraicus to the Hellenotamiae. As the Propylaea approach completion, the treasurers of Athena give part of their funds to the Parthenon sculptures. Of the total receipts (29,147 dr. 4 ob.) in this year, 16,392 dr. given as wages to the sculptors, and 1800 dr. as salaries to the *epistatae*, architects, and secretary.

Year XV, 433/2 B.C.; Apseudes archon, Critiades first secretary to the senate, Anticles secretary to the *epistatae*, Euthias of Anaphlystus to the treasurers of Athena, Philetaerus (or Philemonides) to the Hellenotamiae. The Parthenon sculptures completed and the accounts closed; Phidias accused of embezzlement and

impiety; the outbreak of the Peloponnesian War at the same time terminates work on the Propylaea and the Erechtheum.

B. THE ERECHTHEUM

Fragment *I.G.* I, 414, hitherto missing, has recently been rediscovered in the Epigraphical Museum;¹ the forms and size of the letters are exactly like those of the obverse of the Chandler stele of the Erechtheum, and probably it formed part of the list of miscellaneous unworked stones near the end of Column II, between B and D.²

The accounts of 408/7 B.C. cannot be restored in the manner which I had proposed.³ Against the location of Column II of K above Column I of M, the following objections may now be made: (1) From the 47 lines which I allowed for the frieze sculptures below K, Column II, must be subtracted (a) a few lines for the total payment to laborers and for the salaries to the architect and the under-secretary,⁴ and (b) about 8 lines for the encaustic painters who certainly worked in the seventh prytany.⁵ Therefore of the 47 lines formerly allowed for the frieze sculptures, above M, only 30 at most would now be available. The missing 2448 dr. of frieze sculptures could not possibly have been accounted for in this interval.⁶ (2) A renewed examination of K has shown that the top is not original, as I formerly assumed,⁷ and that the bottom is cut in the same manner, not exactly level; both cuttings are mediaeval, and the amount lost at each end is more than 0.04 m. (the width of the drafted margin cut at the top and bottom of the edge of M).

The evidence now seems to demand (1) an increase in the width of the slabs to four columns (0.896 m.), which would agree, as well as three columns, with the evidence from the dowels, and (2) a return to Kolbe's arrangement of three tiers with a total height of $3 \times 0.958 = 2.874$ m., each column normally containing 250 lines. Supposing that there were three vertical rows or series of slabs, K may be placed in the same slab with M, in the second tier of the second series (columns V–VIII); and as Kirch-

¹ My attention was called to this piece by Dr. Fimmen.

² See *A.J.A.* 1913, p. 245, fig. 1.

³ *Ibid.* p. 257.

⁴ My attention has been called to this by Professor Kolbe.

⁵ Hill, *A.J.A.* 1910, p. 294.

⁶ We should prefer about 61 lines (*A.J.A.* 1913, p. 257).

⁷ *Ibid.* p. 258.

hoff and Kolbe proposed, P and L might be placed in the upper tier of this series (columns VI and VII-VIII respectively), and N in the lower tier (columns V-VI). The only fragment of the first series of slabs (columns I-IV) would then be O from the right edge, and, therefore, in column IV. On the third series of slabs would have been inscribed columns IX-X, from which we have seven fragments (in my former restoration assigned to columns X-XI), Q in the top tier, R and S in the middle tier, while U, T, W, and

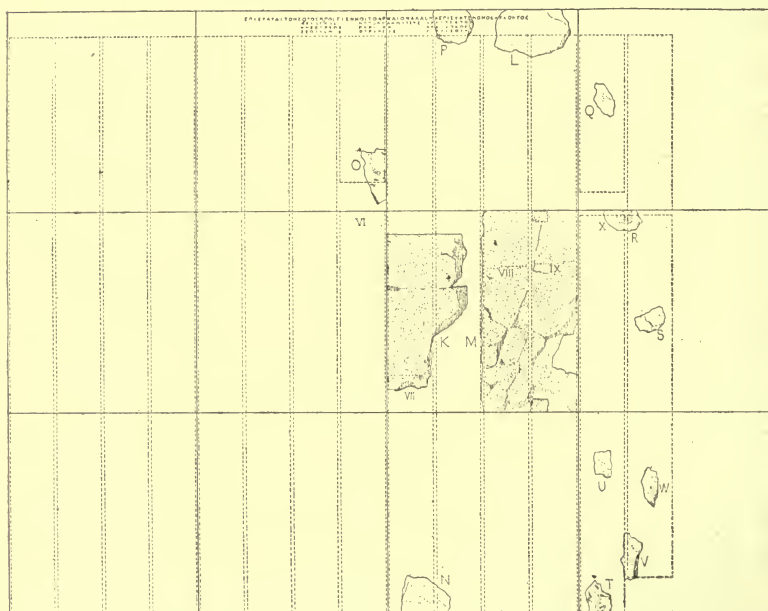


FIGURE 2.—ERECOTHEUM ACCOUNTS OF 408-7 B.C.

V remain as before in the lowest tier. Probably the remaining two columns on this third series of slabs remained unoccupied, and the accounts of 407/6 to 405/4 (X, Y, and Z) appeared on two separate slabs. It may be noted that this arrangement of three series of slabs (nominally twelve columns) in the year 408/7 would bring the main heading, as it now exists, directly in the centre of the central series, above columns VI-VII. To avoid the compression of the first six prytany accounts resulting from this scheme, however, I am of the opinion that we should add another series of slabs at the left, making four in all, K+M

appearing in the third series. The main heading on P+L can easily be so restored as to extend the proper distance to the left, covering the second and third series of slabs (Fig. 2);¹ somewhat as follows:

ΕΡΙΞΤΑΤΑΙΤΟΝΕΟΤΟΕΜΓΟΛΕΙΕΝΗΟΙΤΟΑΡΧΑΙΟΝΑΛΛΑΛΜΑΕΡ
ΙΕΥΚΤΕΜΟΝΟΞΑΡΧΟΝΤΟΞ

A.....	ΗΥΓΟΛΡΑΜΜΑΤΕΥΞ	ΑΡΧΙΤΕΚΤΟΝ
B.....	ΓΥΡΛΙΟΝ	ΑΡΧΙΛΟΧΟΣ
Λ.....	ΟΤΡΥΝΕΥΞ	ΑΛΡΥΛΕΘΕΝ

This allows space for the names of officials who, as well as the architect, required mention in the main heading.

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¹The three fragments of the later accounts of 407/6–405/4 B.C. are not here repeated, their relative positions being as shown in my former article (*A.J.A.* 1913, p. 257).

A GROUP OF ROMAN IMPERIAL PORTRAITS AT CORINTH

II. TIBERIUS

[PLATES VIII-IX]

THE veiled portrait head which is now to be considered was found lying face downward in a stratum of soft reddish earth just within the east wall of the Roman basilica before mentioned.¹ As was the case with the other sculptures discovered in this region, the statue to which the head originally belonged, seems to have stood on an upper floor of the basilica, and was overthrown and shattered in the general ruin incident to the earthquake which destroyed the building. As far as I could determine, no other certain fragments of this work were recovered, although there were brought to light several bits that may well have belonged to it, *e.g.*, a fragment of well worked marble drapery which was found close beside the head, two small pieces of a leg or arm showing traces of dowelling, and two bits of carefully worked marble fingers less than twice life size. The layer of soft earth in which the head was imbedded and to which it doubtless owed its almost perfect preservation was made up apparently of decayed vegetable matter, perhaps the remains of the shattered planks and beams of the floor above, the gradual decay and settling of which had carried the head to the lower level unharmed. When found it was at a depth of between three and four meters.

The head is of an exceedingly fine grained Pentelic marble, white, with little or no signs of weathering, and is preserved from the base of the neck to the top of the veil (cf. PLATE VIII); the break at the neck is diagonal, sloping sharply upward from front to back and extending to the folds of the veil below the ears; the rim of the right ear is also chipped, and a considerable portion of the edge of the veil above is missing. The face itself is perfectly

¹ Cf. *A.J.A.* XXV, 1921, pp. 142 f.



PORTRAIT OF TIBERIUS: CORINTH.



PROFILE OF TIBERIUS: CORINTH.

preserved; scarcely a scratch can be detected on its surface. In scale the work conforms closely to the Augustus,¹ *i.e.*, it is about one half larger than nature, its total height as it stands being .35 to .40 m.,² and judging from the circumstance of the veiling we may conclude that it belonged to a statue of similar type. The head is turned a bit to the right and inclined slightly backward and upward in the same direction, while the neck, due perhaps to the breaking away of the veil which shadowed it, appears rather thick and awkward in proportion to the size of the face. The most striking characteristics of the portrait as a whole are the very subtle modelling of the flesh surfaces, the light curly beard of remarkably fine impressionistic modelling upon the line of the jaw (cf. PLATE IX), the free and plastic rendering of the hair, and the three-fold edging of the veil with its curiously flattened loop at the top. As in the Augustus, the back of the head and veil is crudely rounded off, showing that the statue was made to stand in a niche, or against the wall; and as in the former work, so here too, we note the grotesque forward position of the ears, a trait found to be characteristic of this type of representation.³

Before passing on to the iconography of the portrait there are a few details of technique which demand attention. First, the eyes are fairly wide, with a distinct upward cast and a rather dreamy expression (cf. PLATE VIII); both the upper and lower lids are in clear relief, while the former overlap markedly at the outer corners. Though prominent, the eyes are not set forward in their sockets, and the eyeballs are treated in the flat and impressionistic manner already noted in the Augustus; an unusual detail appears at the inner corners, however, in the form of a membranous tissue inside the lids.⁴ No trace of paint or incision is observable on the surface of the eyeball. The brows are strongly arched and marked by a sharp ridge for the greater part of their length, and considerable modelling appears about the eyes themselves, par-

¹ Cf. *A.J.A.* XXV, 1921, p. 144.

² Further dimensions: length of face .18 m.; length of neck .07 m.; width of face .14 m.; width of mouth .053 m.

³ Cf. *A.J.A.* XXV, 1921, p. 146.

⁴ Cf. Pl. VIII. A similar feature is found in a portrait head of Tiberius in Berlin, cf. Furtwängler, *Die Sammlung Sabouroff*, pl. XLIII and text, also Brunn and Arndt, *Gr. und Röm. Porträts*, Nos. 19 and 20. According to Furtwängler this portrait is not of Tiberius, but rather Augustus or Claudius; that it is of Pentelic marble, from Athens, and dates probably in the second century A.D. I feel certain, however, that it is an idealized Tiberius.

ticularly in the indication of the bony socket and in the roll of flesh which overhangs the outer portions of the upper lid. The handling of the flesh surfaces is masterly,—the modelling far superior in its delicate play of light and shade to that of any other member of the group, and the treatment of the hair with its thick curling locks shows remarkable freedom and life in spite of the fact that here again a fixed and definite iconographic scheme is followed. As also in the Augustus the drill was freely used, care being taken to disguise its effects wherever possible; the characteristic boring appears, however, at the corners of the mouth and along the line of the slightly parted lips, within the nostrils, about the ears, and in the deeply undercut folds of the veil. Surfaces are smoothly worked but unpolished, and on close examination reveal clear marks of tooling both with the fine point and the fine tooth chisel.

In its general finish and artistic completeness the work is much superior to the head of Augustus; it possesses, moreover, a distinct and striking personality, not altogether pleasing perhaps, yet far removed from the ideal, almost abstract rendering of the Augustan features. This unpleasant expression, though difficult of analysis, seems to reside in the rather weak and oversubtle line of the mouth, although the slightly oblique cast of the eyes serves also to heighten the impression. And yet the portrait, despite its marked individuality of conception and subtlety of modelling, partakes somewhat of the calm monumentality of the Augustus; in fact each portrait bears clearly the impress of a common atelier, but the hand which moulded the Augustus was far inferior both in technical skill and in penetrative and interpretative power to that which created the portrait before us.

As yet no assumption has been made as to the identity of the portrait under discussion. It is certain, however, that we have here to do with a likeness of Tiberius in his earlier years, not much later, at any rate, than his exile to Rhodes. Although this attribution may at first sight appear unconvincing, a close study of the available evidence will demonstrate that the conclusion is well founded.

The features of Tiberius are well known to us through contemporary portraits and descriptions; hence, having made due allowance for the usual diversity in conception and treatment, we may summarize as follows the characteristic traits of the Tiberian physiognomy. In profile the line of the forehead appears nearly

perpendicular save towards the top where it bulges slightly; the nose is vigorous, strongly arched and irregular, and generally rather pointed, the mouth small and receding, and the chin rounded and prominent.¹ The hair is sometimes smooth, sometimes curly, and fringes the forehead in a rather angular profile; according to the description of Suetonius it grew low upon the nape of the neck,² a trait not particularly stressed in the portraits, although the hair is generally represented as brought forward at the sides of the neck beneath the ears. His face was frank and open,³ his eyes large,⁴ and he walked with neck stiff and held at an oblique angle, his head and face drawn back.⁵ This characteristic position of the head is generally rendered in the portraits, though for the most part softened to a slight inclination to the right or left. Of the less apparent traits, which are, however, none the less significant for iconographic purposes, I would mention particularly the distinct upward cast of the eyes and the well marked roll of flesh which stands above the lid at the outer corner;⁶ also the arching of the brows as they spring outward from the nose, a trait more characteristic of the youthful portraits;⁷ the shortness of the upper lip as compared with the lower,⁸ and the slight upward slant from left to right of the line of the hair as it passes across the forehead.⁹ A more subtle characteristic and one most difficult to distinguish in photographs is the very light line or furrow which extends downward on each side from the corner of the mouth, serving as it were to enclose the chin and give it added prominence; this trait naturally appears more clearly in those works which depict Tiberius as advanced in

¹ Cf. Bernoulli, *Römische Ikonographie*, II, 1, pl. XXXII, Nos. 17-20.

² Suetonius, *Tiberius*, 68 . . . *capillo pone occipitium summissiore ut cervicem etiam obtegeret, quod gentile in illo videbatur.*

³ Suetonius, *loc. cit.* . . . *facie honesta.*

⁴ Suetonius, *loc. cit.* . . . *cum praegrandibus oculis.*

⁵ Suetonius, *loc. cit.* . . . *Incedebat cervice rigida et obstipa, adducto fere vultu.*

⁶ Cf., among many others, the seated statue and the colossal head in the Museo Chiaramonti, Amelung, *Die Sculp. des Vat. Mus.*, Tafelband I, taf. 60; also a bust in the Louvre, Bernoulli, *op. cit.* II, 1, pl. VII.

⁷ Cf. the works cited, and a head in the Capitoline Museum, Anderson Photographs, No. 1632.

⁸ Cf. the works cited.

⁹ Cf. the head in the Capitoline Museum, Anderson Photographs, No. 1632; a colossal head and seated statue in the Museo Chiaramonti, Amelung, *op. cit.* I, taf. 60; and the head in the Louvre, Bernoulli, *op. cit.* II, 1, pl. VII, etc.

years,¹ yet it is generally present in the youthful portraits as well.² Finally, there remain to be noted particularly the breadth of forehead and temples, the tapering oval of the face, and the persistently similar arrangement of the locks of hair which frame in the upper part of the face. From the purely iconographic point of view the last mentioned, as also in the case of Augustus, is of prime importance; it appears in its most typical form in the following works: the seated statue in the Museo Chiaramonti;³ a standing draped figure of bronze, in the Naples museum;⁴ and a head in Berlin.⁵

Keeping in view the various portraits just mentioned, let us enumerate point by point the characteristic features of the Corinthian head and compare them with the canon as established.

In the first place, then, it is evident that there is considerable divergence in profile (cf. PLATE IX). The forehead is not perpendicular but slopes backward somewhat,—although it should be noted in this connection that our photograph, because of the five-eighths pose of the head, exaggerates unduly this peculiarity; seen in true profile it is much less apparent. As to the bulge at the top, we may assume that it is present, concealed beneath the unusually luxuriant and projecting mass of hair. The nose, too, is less prominent and pointed, and is made to conform more closely to the ideal of classic regularity; we note, however, the characteristic indentation at the bridge as well as the abrupt break in the line of the nose itself. The mouth and chin are much nearer to the general type, particularly as regards the delicate curve of the former, the short upper lip, and the well rounded chin. The profile has, of course, been idealized considerably, yet without in any way altering its essential character; in fact there are extant other well authenticated portraits in which this process of idealization has been carried to even greater lengths.⁶

¹ *E.g.* a head in the Capitoline Museum, Room of Caesars, No. 4, Bernoulli, *op. cit.* II, 1, p. 144, No. 1, Anderson Photographs, No. 1631.

² Cf. the seated statue in the Museo Chiaramonti, Amelung, *op. cit.* I, taf. 60,—seated statue, *ibid.* taf. 67; a gem in Florence, Bernoulli, *op. cit.* II, 1, pl. XXVII, No. 8.

³ Amelung, *op. cit.* I, taf. 67.

⁴ *Bronzi di Ercolaneo*, II, 79, and *Museo Borbonico*, VII, 43.

⁵ Bernoulli, *op. cit.* II, 1, fig. 22.

⁶ Cf., for example, the colossal head in the Museo Chiaramonti, Amelung, *op. cit.* I, taf. 60 right.

In full face the forehead seems less broad and the diameter of the head at the temples is apparently diminished, yet this same unusual characteristic is to be marked, for example, in the well known bust in the Louvre.¹ It is in the treatment of the eyes and brows, however, that there are to be noted some of the most striking points of resemblance; the eyes are large, they possess to a marked degree the distinctive upward cast² which is so characteristic of the more youthful portraits of Tiberius, they show the peculiar roll of flesh beneath the brow at the outer corner, and the brows themselves are arched in true Tiberian manner.³ Furthermore, the lower half of the face, though not so tapering as is sometimes represented, yet furnishes remarkably close conformation to type particularly in the comparative brevity of the upper lip, the delicate, rather sunken curve of the mouth, the prominence of the chin, and the slight perpendicular lines which extend downward from the corners of the mouth.⁴ We note, too, the peculiarity mentioned by Suetonius, the stiff neck and the slight inclination of the head observable in the great majority of portraits.

If further confirmation be required it is amply provided by the iconographic scheme in which the locks of hair across the forehead are fixed. Although varied somewhat in different portraits, the same general division and arrangement of the strands holds good throughout, the few exceptions serving rather to prove the rule than to invalidate it. The central parting is either in the middle of the forehead⁵ or very slightly to the left;⁶ from this the hair divides in two masses curving right and left respectively, each subdivided into two, sometimes three or more smaller locks;⁷ at the temples or, more exactly, above the outer corner of each eye, a group of two or three graceful locks curves sharply inward em-

¹ Cf. A. Hekler, *Greek and Roman Portraits*, pl. 177.

² Cf. a head in the Capitoline Museum, and another at Copenhagen, A. Hekler, *op. cit.* pl. 178 a and b; also the bust in the Louvre, Hekler, *op. cit.* pl. 177, and Bernoulli, *op. cit.* II, 1, pl. VII.

³ Cf. seated statues in the Museo Chiaramonti, Amelung, *op. cit.* I, taf. 60 and 67; also bust in Louvre, Hekler, *op. cit.* pl. 177.

⁴ For these features cf. our pl. VIII with Hekler, *op. cit.* pl. 178 a, pl. 177, and with Amelung, *op. cit.* I, taf. 60 both portraits.

⁵ Cf. Hekler, *op. cit.* pl. 176 b.

⁶ Cf. our Pl. VIII with Amelung, *op. cit.* I, taf. 60 centre; also with Bernoulli, *op. cit.* II, 1, fig. 22; and Furtwängler, *Collection Sabouroff*, pl. XLIII.

⁷ Cf. our Pl. VIII with Hekler, *op. cit.* pl. 176 b and pl. 177; also Bernoulli, *op. cit.* II, 1, fig. 22.

bracing the outer tips of the central mass,¹ while below at the temples and before the ears the hair is brushed forward in a free and unconventional manner.² Finally, it is only necessary to note the upward slant from left to right of the hair across the forehead, a detail which is peculiarly distinctive of the Tiberian iconography,³ and to observe that in the Corinthian portrait the



FIGURE 1.—INSCRIPTION FROM CORINTH.

hair is represented as growing unusually low upon the neck (cf. PLATE IX).

But the final and conclusive proof of the attribution is provided by an inscription (Fig. 1, upper stone) found within the southwest corner of the basilica at about the same level and in the same sort of debris as that in which the head itself was discovered. The inscription, of beautiful monumental character, is engraved upon a polished slab of fine Pentelic marble,⁴ three edges of which are original

and show cuttings for the supporting clamps. Although the second word of the first line is extremely puzzling—not only to

¹ Cf. our Pl. VIII with Hekler, *op. cit.* pl. 176 b and 177; Amelung, *op. cit.* I, taf. 60; or better Anderson Photographs, No. 1453; and Bernoulli, *op. cit.* II, 1, fig. 22.

² Cf. Pls. VIII and IX with the works last quoted.

³ Cf. our Pl. VIII with Amelung, *op. cit.* I, taf. 60 centre; or Anderson Photographs No. 1453; also Hekler, *op. cit.* pl. 178 a and b; Nibby, *Monumenti Scelti d. Villa Borghese*, pl. 26; Bust in Naples Museum, *Museo Borbonico*, XIII, 42, 1; Statue in Naples Museum, *Bronzi di Ercolaneo*, II, 97, etc., etc.

⁴ Measuring .60 m. × .45 m. × .065 m.

restore conjecturally, but also because it interrupts the regular sequence of praenomen and nomen,—it is sufficiently clear from the context that we have here a dedicatory inscription to TIBERIUS CAESAR and the GENS AUGUSTA.

In spite, therefore, of the remarkable regularity of profile and the finely idealized modelling of the Corinthian head, it is certain that in it we are to recognize the features of Tiberius treated with a breadth, subtlety of characterization, and fineness of execution which put the work in a class quite by itself.

The portrait is of such an unusual and distinctive character that it is a matter of no little difficulty to discover analogous works with which it may be compared and classified; it is obviously youthful and thoroughly idealized, retaining withal an individuality and power which is entirely lacking, for example, in the Corinthian Augustus. Furthermore, although the great majority of the Tiberian portraits are remarkable for their youthfulness, most of the extant heads show, with no softening whatever, the line of his quite other than "classic" profile;¹ few also can compare with the Corinthian portrait as a work of art or even as a work of portraiture, at least in the higher sense of the term,—in the sense, I mean, of the power to show forth under a more or less idealized aspect the essential personality of the subject rather than to give a photographic reproduction of his features. Indeed, of the eighty-odd portraits of this emperor listed by Bernoulli, only two—the bust in Munich and the Florentine cameo—are described by him as "*idealisiert*," although there are several others in which this tendency is observable to a considerable degree. Of the material available, therefore, the following works appear the more important and afford the closest analogies to the portrait at Corinth:

1. Bust in the Glyptothek, Munich, No. 314.² Tiberius is represented in early manhood, greatly idealized, with broad forehead which lacks the usual sharp break and indentation at the bridge of the nose; the mouth does not show the characteristic "sunken expression," and hence in this respect is very like the Corinthian portrait. Furthermore, the hair across the forehead is similarly treated in freely curling masses.

¹ Cf. Bernoulli, *op. cit.* II, 1, p. 162.

² Cf. Maffei, *Verona Illustrata*, III, 217, 3; Furtwängler, *Besch. der Glyp. König Ludwig I zu München*, Munich, 1900, No. 314, p. 322; and Bernoulli, *op. cit.* II, 1, p. 153, No. 54.

2. The Florentine cameo, with heads of Tiberius and Livia in profile.¹ This portrait is remarkable as exhibiting the same tendency toward the youthfully idealistic conception of the Tiberian features. Our portrait, however, carries this tendency one step farther in the softening, without loss of character, of the sunken appearance of the mouth.

3. Head in Berlin.² Although a "doubtful Tiberius," this head shows considerable stylistic affinity to the Corinthian portrait not only in its pose and type of face, but also in the modelling of the flesh surfaces, and in the generally idealistic conception. In addition, it produces a marked impression of personality behind the ideal, a peculiarity also of the Tiberius at Corinth.

4. Colossal statue in the Naples museum.³ This can scarcely be called a portrait, since in it the idealization of the features is carried beyond all bounds; we see here, however, a different manifestation of the same tendency so apparent in the work at Corinth.

Mention has already been made of the comparative youthfulness of the Corinthian Tiberius, a trait which it has in common with the majority of extant portraits of this emperor. It is very difficult to account for this peculiarity, the more so since we must naturally suppose that by far the greater number of his portraits were set up during the period of his own reign, *i.e.*, between his fifty-sixth and seventy-ninth year. We found the same true more or less in the case of Augustus also, although for him the explanation was quite simple, inasmuch as he ascended the throne at the age of thirty-two and became as it were the type of the ideally youthful emperor. This theory will not suffice in the case of Tiberius since it is not likely that he was frequently honored with statues after his death, and, moreover, his youthfulness is seldom represented with noticeable idealization; as has been already noted, most of his extant portraits show an irregular profile quite unmodified in the sense of the so-called "classic ideal." Moreover, mere idealization would not demand that he be uniformly represented as a youth of twenty years.

This persistent youthfulness, then, is something of a riddle which can be but partially accounted for by the military fame to which Tiberius attained at a very early age. In this connection it will be remembered that, at the age of twenty-two, he was

¹ Cf. Bernoulli, *op. cit.* II, 1, pl. XXVII, 8.

² Cf. Furtwängler, "*Die Sammlung Sabouroff*," pl. XLIII.

³ Cf. Bernoulli, *op. cit.* II, 1, p. 149, No. 22.

sent to the East at the head of an army to put Tigranes on the throne of Armenia. This mission he not only accomplished satisfactorily, but—what loomed more grandly in the eyes of the average Roman and provincial—he also recovered from the Parthians the lost standards of Crassus. Five years later, in 15 B.C., he led a successful expedition against the Alpine tribes, and three years after that he conducted a brilliant campaign against the Pannonians for which he was rewarded with a triumph. Since he thereby established, as it were, his prospects for the succession to the throne, there can be no doubt that his victories were celebrated by the erection of many statues in his honor. In all probability, therefore, it was at this time that the prevailing youthful type of Tiberian portrait was established; and once this were accomplished the tendency toward alteration would be slight, the more so since the portrait sculptors and gem engravers seldom worked from a living model, and Tiberius himself as he advanced in years would doubtless prefer to keep his more youthful portraits before the people. Even after he came to the throne the younger type of representation must have lingered persistently, since in the great majority of his portraits he is shown as considerably younger than he was when he actually ruled.¹

It is quite evident that the figure to which our portrait belonged must have been of the same general type as the Augustus of Corinth, must indeed have served it as a "companion piece" in the great imperial group of which each seems to have formed a part. The veiling of the head proves conclusively not only that the statue represented a *togatus*, but also that the pose and gesture were those of a person conducting a sacrifice according to the *ritus Romanus*, an essential observance of which was the *velatum caput*.² As far as it is possible to judge from the position of the head, direction of the gaze, etc., the pose was very like that of the Augustus,³ although I consider it probable that, with regard to symmetry of grouping and composition, the weight of the figure may well have been shifted to the left leg. In fact the scale, type, technique and general treatment of the two portraits are so nearly identical that we may safely conclude not only that they were erected at about the same time, but also that they formed

¹ For a fuller discussion see Bernoulli, *op. cit.* II, 1, pp. 161 f.

² Cf. *A.J.A.* XXV, 1921, pp. 145 f.

³ Cf. the Augustus, Pl. V, with Pl. VIII of the present article.

in all probability component parts of a larger whole. The bodily forms, proportion, treatment of drapery, etc., must also in the case of the Tiberius have conformed closely to those exhibited by the Augustan figure; we see for example the same powerful rendering of the neck and throat, the same "stringy" quality of the drapery,¹ and much the same treatment of the hair. It follows, therefore, that in this work we have another example of the neo-Attic school in Greece.

A further point worthy of note is that toga-clad statues of Tiberius, particularly those *velato capite*, are very rare. Bernoulli lists but one, the veiled statue in the museum of Aquileia; he mentions, however, three *statuae togatae* upon which have been set portrait heads of Tiberius not originally belonging to them, and of these one only has the head veiled.² To this list I would add a bronze portrait statue from Herculaneum now in the Naples museum, a work which discloses some interesting analogies to the Corinthian portrait both in iconography and in the treatment of the veil.³

Before terminating our discussion of the Tiberius at Corinth there remains to be considered the troublesome question of date; and here, also, as in dealing with the portrait of Augustus, our conclusions must be drawn entirely from internal evidence inasmuch as no exact data were furnished by the circumstances of the discovery itself.

We have already seen that the apparent age of Tiberius as represented is practically worthless as a criterion of date, since the great majority of his portraits, even those erected in the last year of his reign, are chiefly remarkable for their youthful character. The only conclusion to be drawn, therefore, is that this portrait was in all probability not erected before 20 B.C., the year in which Tiberius first attained to military distinction, being then at the age of twenty-two. A scarcely more reliable criterion is that furnished by the veiling of the head, a practice which, as already observed in the case of Augustus, is open to various interpretations;⁴ as regards Tiberius, however, the range of conjecture

¹ Cf. the Augustus, Pl. V, with Pl. IX of the present article.

² Bernoulli, *op. cit.* II, 1, p. 163.

³ Cf. *Guida del Museo Naz. di Napoli*, p. 198, No. 793; also *Bronzi di Ercolaneum*, II, 79; *Museo Borbonico*, VII, 43, etc. Bernoulli, *op. cit.* II, 1, p. 172, No. 16, classes the portrait under "Unbekannte Claudier," although he says "*Er hat im Schädelbau und Untergesicht, zum Teil auch im Profil, grosse Ähnlichkeit mit Tiberius.*"

⁴ Cf. *A.J.A.* XXV, 1921, p. 156.

is reduced somewhat by the fact that, in his case at least, the veiling could not be taken as an indication of deification, since it is extremely doubtful whether Tiberius was ever honored in this manner.¹ Furthermore, the theory which connects the veiling with a form of consecration in which the *genius* of the emperor takes an important part is vitiated by the fact that no statues of the *genius* type are known in the case of Tiberius, none certainly in which are to be discovered traces of a cornucopia as attribute.² Of the two possible remaining interpretations, that of the veil as a badge of the pontificate is, to say the least, doubtful. Nevertheless, I consider it worth while to review briefly the evidence bearing on the question, notwithstanding the fact that from our study of the Augustus we are already predisposed to discredit the theory.

From the entire list of the portraits of Tiberius which are known to me, four heads only are veiled: viz., the toga-clad statue in Aquileia;³ the head set upon a foreign toga-clad statue in Margam;⁴ a bronze toga-clad statue in the Naples museum;⁵ and the head at Corinth. Of these, the heads in Margam and Corinth are youthful, that of the statue in Naples is considerably older, while the apparent age of the portrait in Aquileia is unknown to me. We may, perhaps, assume that the last mentioned belongs to the majority, and is also youthful. How, then, do these apparent ages check up with the date of the assumption of the pontificate by Tiberius? At first sight rather unsatisfactorily, since Tiberius became Pontifex Maximus on March 10, 15 A.D., at the age of fifty-seven.⁶ We have, however, a bit of evidence which would seem to indicate also a much earlier date; I refer to an inscription in Rome, published by Orelli, in which Tiberius is named Pontifex as of the year A.U.C. 747, i.e., 6 B.C.⁷ If both these dates be accepted it is evident that, in the case of Tiberius,

¹ But cf. Pauly, *Real-Encyc.*, s.v. Tiberius: *In späterer Zeit erhielt auch er göttliche Verehrung; wenigstens kennen wir zwei flamines Ti. Caesaris Augusti, nämlich C. Egnatius Maro (Orelli, Inscr. No. 2217) und L. Cornelius L. f. Men., flamen Romae Ti. auf einer Inschrift aus Surrentum bei Garrucci, Mon. Baeb., p. 32."*

² Cf. A.J.A. XXV, 1921, p. 156.

³ Cf. Bernoulli, *op. cit.* II, 1, p. 154, No. 55.

⁴ Cf. Bernoulli, *op. cit.* II, 1, p. 153, No. 50.

⁵ Cf. *Bronzi di Ercolaneo*, II, 79.

⁶ Cf. Cohen, *Méd. Imp. Rom.* I, p. 119, No. 1; p. 121, No. 25; etc.; also Egbert, *Latin Inscriptions*, p. 125.

⁷ Orelli, *Inscr. Lat. Sel.* I, No. 599.

we at least have nothing to prove that the veil *does not* indicate the pontificate, since the apparent ages of the veiled portraits mentioned correspond fairly closely to the two dates at which Tiberius is known to have occupied this office. Thus the bronze in Naples would date *ca.* 15-16 A.D., the head in Margam, the statue in Aquileia (?), and the head in Corinth *ca.* 6-5 B.C.

Although the above argument is admittedly weak, it will serve to justify, at least provisionally, the assumption of *ca.* 6 B.C. as a *terminus post quem* for the Corinthian Tiberius. But the possibilities of arriving at a more definite conclusion in this matter are not yet entirely exhausted. We have still to investigate the interesting detail of the appearance of the beard in the Corinthian portrait, particularly with reference to a possible indication of date to be derived therefrom.

It is well known that the beard was not generally worn by Romans of the late Republic and the early Empire, the custom of going clean shaven holding sway from the late Hellenistic period to the reign of Hadrian. But apparently throughout this period the beard was worn in modified form by certain classes of men and under certain definite circumstances, since it appears occasionally on portrait statues and even more frequently on coins, gems, etc. We know that the Romans early borrowed from the Greeks the custom of consecrating to the gods the first beard of youth, a ceremony which was observed at about the twentieth year.¹ Thereafter the youth again allowed his beard to grow, and cultivated carefully not the entire beard, but the so-called *barbula*, which was merely a tuft of hair before the ears and along the line of the jaw. This seems to have been worn in more or less modified form until about the fortieth year, after which a man regularly went clean shaven. If a beard were worn thereafter it would be for some definite reason, unless, of course, it were allowed to grow through mere negligence, as was sometimes the case; in general, however, the beard at this time was considered the outward and visible sign of great affliction, motivated either by mourning for the death of a near relative, by a conviction at law, by the necessity of defending oneself against a public accusation; or by some great calamity. Thus, for example, Caesar, after

¹ But cf. Dio, XLVIII, 34. In recording events of 39 B.C., when Octavian was twenty-four years of age, he says of him "ἀμέλει τὸν πώγωνα ὁ Καῖσαρ τότε πρῶτον ξυράμενος αὐτὸς τε μεγάλως ἑώρασε καὶ τοῖς ἄλλοις ἀπασι δημοτελῆ ἐορτὴν παρέσχε. καὶ ὁ μὲν καὶ ἔπειτα ἐπελειούτο τὸ γένειον . . ." etc.

the defeat of his legate Titurius in Gaul, allowed his hair and beard to grow,¹ as did Cato after the battle of Thapsus, Marc Antony after the battle of Mutina, Octavius after his rupture with Sextus Pompeius, and later after the defeat of Varus.² We know further that on certain coins and engraved gems aged emperors are represented as youthful and wearing the *barbula*, although the individual portraits are proved to have been made after the death of the person represented. A remarkable example of this is seen on a coin of Julius Caesar,³ struck sometime after his death; although Caesar is regularly represented as beardless in all his other portraits, he here appears with the *barbula*. There is but one possible explanation for this, viz., that it symbolizes his apotheosis as proclaimed by the Senate, and it thus becomes, as it were, the sign of the eternal youth assumed by the departed. Many other examples of the same sort might be cited.⁴

It seems, then, that the beard worn by the Tiberius of Corinth is open to explanation on several different counts,⁵ all but one of which must be eliminated if accuracy of dating is to be obtained.

First of all, we may reject the hypothesis that the beard is in this instance to be interpreted as an indication of apotheosis, inasmuch as we have already seen that Tiberius was apparently not thus honored—certainly not until a considerably later date.⁶ We may likewise discard the theory that Tiberius is here repre-

¹ Suetonius, *Div. Iul.* 67; "*Diligeat quoque usque adeo, ut audita clade Tituriana barbam capillumque summiserit, nec ante dempserit quam vindicasset.*"

² Cf. Suetonius, *Div. Aug.* 23; "*Adeo denique consternatum ferunt, ut per continuos menses barba capilloque summisso caput interdum foribus illideret.*"

³ Cf. Daremberg et Saglio, *Dict. des Antiq. Gr. et Rom.*, fig. 788.

⁴ Cf. Daremberg et Saglio, *Dict. des Antiq. Gr. et Rom.*, s.v. *Barba*, for the whole subject.

⁵ Possible interpretations of beard:

1. Sign of apotheosis.
2. Worn through mere negligence.
3. Worn as indication of youthfulness, either
 - a. Before first consecration of beard at ca. 20 yrs.; for Tiberius, 22 B.C.
 - b. As *barbula*, from 20 to ca. 40 yrs.;—for Tiberius, 22–2 B.C.
4. Worn as a sign of affliction, because of
 - a. Conviction at law.
 - b. Necessity of acting as defendant in a trial.
 - c. Great public calamity.
 - d. Death of a near relative.

⁶ Cf. p. 259, and note No. 1.

sented with a beard worn through mere neglect of his personal appearance since, quite aside from the fact that no statement of such negligence on his part is made by any of the numerous ancient writers who mention him,¹ it is highly improbable that a characteristic of this sort would be perpetuated in a work of art so obviously idealized as is the head at Corinth. That the beard is here shown as a mere indication or attribute of blooming youth is an assumption more difficult of contravention, particularly in view of the fact that the portrait is so obviously youthful. Nevertheless, it seems to me that, although not actually capable of being disproved, this theory may be considerably weakened. We have already observed that, taken as a whole, the series of extant portraits of Tiberius is remarkable for its generally youthful character; if, then, the beard really served at this period as an attribute of youthfulness in imperial portraiture, we might reasonably expect to find it represented with some frequency in the Tiberian series. As a matter of fact, however, the head at Corinth is, to the best of my knowledge, the only sculptured portrait of Tiberius in which this feature occurs. Bernoulli² mentions an onyx on which is represented a mail-clad bust facing to the right, "*mit leicht sprossenden Lippen- und Kinnbart*"—a very doubtful portrait of Tiberius, as Bernoulli himself is free to admit; from which circumstance we are justified, it seems to me, in excluding it from the argument. Furthermore, bearded portraits of this emperor are a rarity even on coins, and few, if any of this type, are to be dated from his early years. Take, for example, the bronze struck at Lyons in 10 A.D.,³ when Tiberius had reached the age of fifty-two. Here, although the features are rather youthful for one of mature years, by no possible stretch of the imagination can the short cheek-beard be interpreted as in itself an indication of youthfulness, or as so intended on the part of the die-cutter. In fact it can be explained only on the ground that it is here worn as a sign of mourning for the defeat of Varus which occurred in the previous year. All things considered, therefore, it seems highly improbable that the beard of the Corinthian portrait should be interpreted as a mere badge of youth.

¹ Cf. with the specific mention of Augustus in this sense, Suetonius, *Div. Aug.* 79 . . . *quamquam et omnis lenocinii neglegens.* . . ."

² *Op. cit.* II, 1, p. 158, No. q., pl. XXVIII, 1.

³ Cf. Bernoulli, *op. cit.* II, 1, p. 141, and pl. XXXII, 19; also Mongez, *Icon.* pl. 22, 6; Lenormant, *Icon.* pl. IX, 2; and Cohen, *op. cit.* I, p. 192, No. 28.

We are thus reduced to the conclusion that, in the case at least of the Tiberius at Corinth, the beard is worn as a sign of affliction. This is further borne out by the fact that the hair is also extremely long and thick, and in this respect quite different from the great majority of portraits, where it is noticeably scant and close fitting.¹ It remains, then, to decide to what particular misfortune suffered by Tiberius it should be referred. In this connection we can immediately exclude the possibility of its having any reference to an action at law since, although the emperor and the members of the royal family were still at this period subject to the common law at least in theory, it is well known that, as a matter of fact, they were quite above it. Of the two remaining possibilities mentioned, that which would explain the beard as a sign of grief for a great public calamity seems the less probable inasmuch as public misfortunes of any considerable magnitude were, in the first place, comparatively rare in the period of the early Empire, once the civil war incident to the establishment of Augustus upon the throne had been concluded. In fact the only outstanding calamity of the whole period comprised between the battle of Actium, 31 B.C., and the death of Tiberius was the defeat of Varus in the battle of the Teutoburgerwald, 9 A.D. That the latter should be regarded as occasioning the beard worn by the Tiberius at Corinth seems extremely doubtful since, if such were indeed the case, we might logically expect the other members of the Corinthian group to appear bearded for the same reason. Such, however, is not the case, and hence we conclude that the grief here commemorated must have been of a more private and personal nature. Exactly what this was appears at first sight difficult to say, since Tiberius is known to have been in mourning on a number of different occasions. A closer study of the circumstances of the latter, however, will enable us to select one among them as the most probable. Furthermore, in so doing we may exclude from consideration any private losses which Tiberius suffered previous to the year 6 B.C. which, as we have already seen, is to be taken as the probable *terminus post quem* of the work.

Briefly, then, the losses by death in the Julio-Claudian house between 6 B.C. and 37 A.D., when Tiberius himself died—losses, at least, in which Tiberius was presumably sufficiently interested to

¹ For long hair as well as beard cf. Suetonius, *Div. Iul.* 67 "barbam capillumque summiserit" . . . ; *Div. Aug.* 23 "barba capilloque summisso."

signalize his grief by the outward assumption of mourning—are: 1. The death of his stepsons Lucius and Gaius Caesar in 2 and 4 A.D. respectively. 2. The death of Augustus in 14 A.D. 3. The death of his nephew Germanicus in 19 A.D. 4. The death of his son Drusus in 23 A.D. 5. The death of his mother Livia in 29 A.D. Of these the last four may be eliminated at once from our problem. We have already decided that the portrait of Augustus at Corinth was set up during the lifetime of the latter;¹ we have also observed the many and striking affinities in style, technique, scale, material, etc., exhibited by the Corinthian portraits of Tiberius and Augustus and have concluded that they were in all probability erected at about the same time as members of a single group; this granted, it is evident that the beard of Tiberius is worn neither in mourning for the death of Augustus nor for any of the losses suffered thereafter, but for a bereavement occurring between the years 6 B.C. and 14 A.D. This can only be the death of one or both of the young Caesars his stepsons.

So far so good; but a serious difficulty presents itself. If the two Corinthian portraits were set up at the same time, let us say *ca.* 4–5 A.D., how does it happen that the Tiberius alone wears mourning for the two young Caesars whereas Augustus, their maternal grandfather, is not so represented? The omission appears the more remarkable when we consider that to the latter their death was undoubtedly an occasion for real grief and keen disappointment, whereas to Tiberius it could not have served otherwise than as a cause of rejoicing,² a relief and rejoicing which, however, was necessarily dissimulated most carefully beneath a show of mourning. Several explanations are possible, though all are problematical. We may well suppose that work had been started on the group as early as 1–2 A.D., before the death of Lucius Caesar.³ The Augustus would naturally be one of the first portraits undertaken and completed, whereas the Tiberius would as certainly have been one of the last; in fact it is scarcely probable that Tiberius, due to his banishment and the general disfavor into which he had fallen at Rome, would have been honored at all with a statue between the years 6 B.C. and 3–4 A.D. His fortunes seem to have been at so low an ebb, and the assumption of his unpopularity at court so firmly established,

¹ Cf. *A.J.A.* XXV, 1921, p. 157.

² Cf. Suetonius, *Tiberius*, 13.

³ *Obit* August 20, 2 A.D.

that certain of his portraits in the provinces were at this time even thrown down.¹ On the other hand, this attitude must have been immediately reversed upon his recall to Rome,—a reversal further accentuated and soon converted into open flattery by the speedy deaths of Lucius and Gaius, and his own subsequent adoption by Augustus. Indeed there would then be every reason for adding to an imperial group the portrait of Tiberius who also, as heir apparent to the throne, might well be represented under an aspect similar to that of his stepfather the Emperor; quite naturally, also, he would be shown as in mourning for his own stepsons Gaius and Lucius.

The above theory is advanced with considerable hesitation and in full realization of the difficulties involved in its acceptance. However, in view of the fact that there is a considerable body of evidence bearing upon this question yet to be adduced from a study of the remaining statues of the group, I can only request that in the present instance final judgment be suspended. We may say, therefore, that, up to the present at least, the general trend of the available evidence indicates a date of *ca.* 1 A.D. for the Augustus, and of *ca.* 4 A.D. for the Tiberius.

In conclusion I must insist once more upon the remarkably fine quality and the genuine artistic merit of the portrait of Tiberius at Corinth. Not only is the work itself of unusual excellence from the technical point of view, giving evidence of a grasp of form and rendering and a skill in craftsmanship quite worthy of the best Greek tradition, but also—what is, perhaps, more important—it presents to us an entirely new and highly idealized interpretation of the inner character as well as of the outward appearance of a prince much slandered in his own and later ages,—a man whom we may well believe, as we study this latest likeness handed down to us from the mists of antiquity, to have been “more sinned against than sinning.”

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¹ Cf. Suetonius, *Tiberius*, 13 . . . “*contemptior in dies et invisior. adeo ut imagines eius et statuas Nemausenses subverterint.*” . . .

A GROUP OF ARCHITECTURAL TERRA-COTTAS FROM CORNETO

IN a series of papers, which have appeared in this JOURNAL,¹ some written in collaboration with Dr. Leicester Bodine Holland,² and others written unassisted, I have endeavored to describe in a manner adequate to their importance the fine collection of Etruscan architectural terra-cottas existing in the University Museum in Philadelphia, and, to a lesser extent, in the Metropolitan Museum in New York. The articles that have appeared the more recently have dealt with a series of antefixes from Cervetri. It is the purpose of this paper to discuss a very interesting group of antefixes and fragments from Corneto.

Like all the other items in the collections of architectural terracottas belonging to the University Museum, these were acquired by means of the good offices of Professor A. L. Frothingham, and were divided into two parts on reaching this country, of which the larger came to Philadelphia, and the smaller to the Metropolitan Museum in New York.³

Figure 1 shows them as they appeared when they were found, and before they had left Italy. It will be seen that they were a large and imposing group of architectural fragments. One piece shown there, a revetment, will be recognized by those who have followed these studies in Etruscan architectural terra-cottas as

¹ 'An Etruscan Openwork Grill in the University Museum, Philadelphia,' *A.J.A.* XXI, 1917, pp. 296-307 (with Dr. Holland), 'Terra-cotta Revetments from Etruria in the University Museum, Philadelphia,' *Ibid.* XXII, 1918, pp. 319-339 (with Dr. Holland); 'Note on Etruscan Architectural Terracottas,' *Ibid.* XXIII, 1919, pp. 161-62; 'Archaic Antefixes from Cervetri in the University Museum, Philadelphia,' *Ibid.* XXIV, 1920, pp. 27-36; 'Etruscan Shell Antefixes in the University Museum, Philadelphia,' *Ibid.* XXIV, 1920, pp. 352-369.

² Now Fellow in Architecture at the American School of Classical Studies at Athens.

³ As usual, I am under an obligation of sincere gratitude to the authorities of the Metropolitan Museum for much courtesy and kindness.

having already been published.¹ In publishing it, the writer and Dr. Holland agreed in assigning it to the third century B.C.; and there is no reason to dispute this date, but rather to confirm it, from the evidence offered by the antefixes themselves.

No definite information has been available to tell us at what part of the ruins of the ancient Tarquinii these fragments were found. We cannot, therefore, determine what shrine was adorned by these terra-cottas. In date they are late in the Etruscan period, later, indeed, than the bulk of the tombs in the justly famous necropolis. They are said to have been excavated in 1895-1896, and were acquired by Professor Frothingham in 1896-1897.²

All of the fragments, with the exception of the piece of revetment mentioned above, are of antefixes, of the "shell" or "canopy" type; and it must be admitted at the start that they are not so interesting or so fine as those of this type from Cervetri.³ In the first place, they are of later date, and the technique, while perhaps more perfect than in



FIGURE 1.—ARCHITECTURAL TERRA-COTTAS FROM CORNETO.

the former examples, is, nevertheless, softer and less virile. Secondly, they are not nearly as well preserved. In no case does any antefix retain its complete "shell," and, therefore, it is harder to discuss the "shell" ornament, and practically impossible correctly to restore this decoration in detail. A third reason lies in the fact that we have little or no opportunity, as in the specimens from Cervetri, to trace the development of one type from another. Of this Corneto group, only three types exist, one male and two female, and they are all synchronous. These types will be numbered I, II, and III; while a fourth type, of much later date, and only included for the sake of completeness, will be called Type IV.

¹ Luce and Holland, *A.J.A.* XXII, 1918, p. 328, No. 9, and pl. IX, No. III.

² As far as is known, the objects to be described have not before been published; nor have I been able to find examples of the types which they represent in any of the Italian publications accessible to me in writing this paper.

³ Luce, *A.J.A.* XXIV, 1920, pp. 352 ff.

Type I is one of the two female types, and is by far the most common, and the best preserved, of all. I know of nine specimens in this country alone, to say nothing of what there may be in Italy. Of these, six are in Philadelphia, and three in New York. The best preserved examples are two in Philadelphia, bearing the accession numbers MS1824 and MS1825.¹ To illustrate the type, No. MS1824 has been selected for publication (Fig. 2).

In their original state these antefixes must have been very brilliant. One of the examples in Philadelphia, No. MS1818,² proves this. Although on this specimen practically the entire shell has been broken away, the face is in perfect preservation,



FIGURE 2.—ANTEFIX FROM CORNETO:
TYPE I.

and the colors are nearly all still quite fresh, revealing the following color-scheme: The flesh is of a brilliant and rather chalky white; the lips, pupils of the eyes, lashes, eyebrows, and hair are of a red, which, in spite of its darkness, is nevertheless very striking; while the diadem worn on the head is a bright orange yellow. The top of the diadem, and the veil, which is represented as worn over it, and resting on the back of the head, are red and white.

One of the specimens in Philadelphia, No. MS1820³, has preserved a fragment of the base in front, on which the antefix rested;⁴ and the color-scheme there seems to have been a maeander pattern of white on a red ground; but the color is so poorly preserved on this specimen that we cannot arrive at any definite conclusions.

It will be asked if there is evidence to believe that the color-scheme described above applies equally well to all the antefixes of this type; and this point is well taken. In the Cervetri speci-

¹ As exhibited in the case, they bear the numbers 264A and 264B.

² Case number, 252A.

³ Case number, 252C.

⁴ This is the only specimen of the nine in which any of the base remains.

mens, we have seen that in minor details the antefixes differ from each other quite freely in the choice of colors employed. It must be admitted at once that no answer can be given to such a question, but that it is assumed, perhaps without warrant, that the color arrangement is the same on all the specimens of this type that we have.¹

The hair, which is worn parted in the centre, falls in waves along the forehead, and there are ringlets behind each ear, along the neck. The impression which the modeller seeks to create is of masses of hair; and this effect is very well obtained.

The design of the "shell" is of a tendril pattern, a marked departure from the conventionalism of the "shell" antefixes of earlier date, with their tongue patterns or palmette-lotus design. The leaves, branches, buds and flowers are rendered, as shown in Figure 2, in a most naturalistic and free style, indicating great knowledge on the part of the modeller, and the despair of the restorer of the pattern, as there is none of the top left on any of them to show how they went. Their color-scheme seems to have been to have the design in white on a background of which the inside was red, and the outside appears to have been black.



FIGURE 3.—PROFILE OF ANTEFIX FROM CORNETO: TYPE II.

In many cases considerable portions of the cover-tile remain at the back, which is held to the antefix by a short, thick, and solid buttress of terra-cotta, of the type shown in Figure 3, where the buttress of a male antefix of Type II is illustrated. It is the writer's belief that it is due to the structural deficiency of this type of buttress that these antefixes are so much less well preserved than those from Cervetri. A comparison of Figure 3 with the buttresses on the Cervetri specimens (Fig. 4) shows that

¹ See the color-scheme charts in Luce, *A.J.A.* XXIV, 1920, pp. 361, 366-367 for Types IV and V of the "shell" antefixes from Cervetri, to see how these specimens differ from each other in minor details of color.

in the case of the latter, the buttress was set further back on the cover-tile, and, therefore, gives the "shell" a firmer support, as it is necessarily of greater size and strength to accomplish this result. In the case of the Corneto group, the buttress is set too close to the junction of the antefix with the cover-tile to afford any great support to the "shell." The result is that the buttress is short and inadequate, and leaves the upper part of the canopy without any support whatever. The phenomenon exists in three of the six specimens in Philadelphia of Type I, for instance, of the buttress being completely preserved, while the top of the



FIGURE 4.—PROFILE OF ANTEFIX FROM CERVETRI: PHILADELPHIA.

canopy is missing; and this occurs on only one of the specimens from Cervetri,¹ while the contrary is true in many instances in that group; namely, that the "shell" exists while the buttress is missing. This buttress, then, in the opinion of the writer, is inadequate and useless as a support to the canopy of the antefix.

It will here be convenient to list the number of specimens of the Corneto Type I that have been found, giving in each case the amount of the original preserved. To this will be appended a chart of dimensions which should

enable the reader to see at a glance the slight variations existing in the different examples.

1. Philadelphia MS1818. Parts preserved: head and small part of "shell," and the buttress. In no place does the full width of the "shell" exist. The colors on this specimen are unusually well preserved, and form the basis for the color-scheme evolved at the beginning of this paper.

2. Philadelphia MS1820. Parts preserved: face up to diadem; a part of the base at the right, and a large portion of the lower right hand part of the "shell." The left part of the neck is gone, as

¹ Philadelphia Accession No. MS1826, of Type V of the Cervetri antefixes.

well as the top of the head, including the diadem and veil. A small part of the cover-tile is left, but the buttress is missing. This is the only specimen of this type with any of the base preserved. This base is 2.5 cm. high, and is apparently decorated with a maeander pattern in white on a red ground; but as much of the color is gone, it is impossible to state this with accuracy.

3. Philadelphia MS1824. Published in Figure 2. Parts preserved: head; left side of "shell" complete for about half way up, and small parts of the top and right side, but in the former case not enough to give any idea as to how it should be restored. The buttress is preserved. Broken off at the neck, so that the base is missing.

4. Philadelphia MS1825. Parts preserved: head to chin (chin broken away); right side of "shell" complete about one third of the way up, and small fragments of the "shell" at the top and left. The buttress is preserved, but none of the cover-tile.

5. Philadelphia MS1827. Parts preserved: head (portion of right part of head lost); and small portions of "shell" at the top and the left side. The buttress is missing.

6. Philadelphia MS2143. All that remains of this specimen is the top of the head, with the hair, diadem, and veil, and the beginning of the top of the "shell." The top of the buttress is also preserved.

7. New York GR1025. Parts preserved: head, neck and beginning of base at centre, and fragments of the bottom of the "shell" at left and right, and the beginning of the top as well. The buttress is also preserved. The colors are nearly all missing, and the specimen has a battered look.

8. New York GR1026. Parts preserved: head to chin; and a small piece of the top of the "shell," but not enough to make it possible to effect a restoration. There has been a slanting break at the left, that has taken away most of the left background of the face.

9. New York GR1029. Parts preserved: head, and part of the beginning of the shell at the top. The background of the head has entirely gone. The colors on this are better preserved than on any of the other New York specimens.

In the chart that follows, it will be noticed at once how very uniform the inner measurements (*i.e.*, those of the head) are. This proves that a very uniform clay was used for each specimen,

and that due allowance seems to have been made for shrinkage in the mould.

CHART OF DIMENSIONS OF ANTEFIXES FROM CORNETO, TYPE I

Example	Height Over All	Width Over All	Height of Face, Chin to Veil	Width of Face	Width of "Shell"
Philadelphia MS1818.....	21.7	19.3	17.0	12.9	*
Philadelphia MS1820.....	19.7	19.8	14.2†	12.9	*
Philadelphia MS1824.....	25.3	29.8	17.0	13.0	10.0
Philadelphia MS1825.....	21.0	29.8	16.1†	12.9	11.0
Philadelphia MS1827.....	25.3	20.8	17.0	13.0	*
Philadelphia MS2143.....	15.3	17.0	*	*	*
New York GR1025.....	24.8	24.6	17.2	12.9	*
New York GR1026.....	25.0	22.1	17.0	12.9	*
New York GR1029.....	20.0	20.4	17.0	12.9	*

All dimensions are given in centimetres.

* This part of the antefix is lost.

† Measurement is given as preserved. If complete, it would probably check up with the others.

On the basis of Figure 1, and also because of the fact that only in Type I is any of the "shell" preserved, it seems best here to discuss a number of fragments of antefix canopies that are also said to have been found at this site. All of them are in Philadelphia. Two are illustrated in Figure 1; but they bring with them others, the design of which proves them to come from the same site. They will be discussed in detail, beginning with those of which the provenance is fixed by Figure 1.

1. Accession No. MS2130. Small fragment of antefix canopy, showing a tendril and vine decoration, almost the same as that existing on the Type I group, with slight variations, which prove that it cannot have come from an antefix in that group. Appears in Figure 1.

2. Accession No. MS2132. A larger fragment with the same design as the preceding. Evidences of color remain, showing a scheme of the design in white on a background, of which the inner part appears to have been red, the outer part black. Appears in Figure 1.

3. Accession No. MS2182. Small fragment, giving part of the tendril design already to be found at the base of the Type I antefixes. It belongs on the right side, about on a level with the left ear of the head, and includes the spiral and blossom shown

in the corresponding place on the opposite side in Figure 2. This object does not appear in Figure 1, but its design makes it absolutely certain that it is to be considered as belonging to the Corneto group.

4. Accession No. MS2203. Fragment with a design of almost, if not quite, identical nature to that on MS2130 and MS2132. It is safe to say that if they belong in the Corneto group, this one also must be included.

Somewhat less certain are the following fragments, which on grounds of similarity are assigned to this group. Neither of them appears in Figure 1, but a study of them has convinced me that they ought to be classed here.

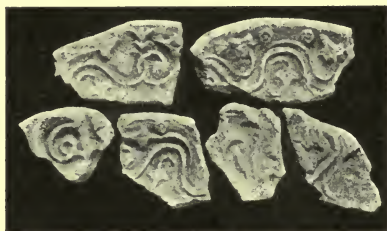


FIGURE 5.—FRAGMENTS OF CANOPIES FROM CORNETO: PHILADELPHIA

5. Accession No. MS2204. Fragment with similar tendril design, probably to be regarded as from a similar "shell," and belonging in this group.

6. Accession No. MS2235. Fragment of "shell" with a tendril decoration similar to that on the Type I antefixes.

These antefix fragments are illustrated in Figure 5.

As in the case of the specimens from Cervetri, there is a male counterpart to the female type, which we have just studied. This type, however, is not so easy to work with as the preceding, for three reasons. First of all, only four specimens are known to me in this country, three of which are in Philadelphia, and one in New York. This at once limits the field of investigation. Secondly, on none of them has enough of the "shell" or canopy been preserved to make possible a restoration of its design. It may, therefore, have been the same as that of Type I, or it may have been a variant; there is no means of telling from the specimens accessible to me. In the third place, the color-scheme of the type is very poorly preserved. I have selected a specimen in Philadelphia (Accession No. MS1822)¹ as the best preserved for illustration (Fig. 6), and it is plain how little remains of this type.

It will at once be noticed that the male type we have here differs radically from the grinning satyrs so popular at Cervetri, Falerii, and elsewhere. Instead, though the ears, to be sure, are

¹ Case number, 253C.

those of a satyr, we have a calm, almost Olympian, type of head. The eyes are deep-set, and the expression is thoughtful and benignant. This would seem to betoken the late date of the series, and add a weight of its own to the evidence obtainable from an examination of the female heads. The beard and hair are represented as heavy and thick; at the sides run small tendrils, which may be thought of as pieces of vine.

As far as it can be made out, the color-scheme of these fragments is as follows: the flesh is red, the hair and beard black,



FIGURE 6.—ANTEFIX FROM CORNETO:
TYPE II.

irises of eyes white, pupils red, eyebrows and lashes black, ears red. The color is best shown on one of the specimens in Philadelphia, No. MS1821,¹ of which, however, only the head remains. The neck, as much of it as shows, is red, and the background against which the head appears seems to be red and black. Color was applied on a white slip, which was first laid over the coarse, porous clay. Of the example published in Figure 6, a small portion of the cover-tile remains, with the buttress of terracotta that supported the head

and "shell," which is shown in the profile view given in Figure 3. The same fault exists in the case of this buttress, that we have seen existed in the case of Type I; but here the execution and damage done is greater, as there is no example of this type, in America at least, where any of the "shell" is preserved.

Taking up the four examples separately, a detailed description will be given of each, followed by a chart of dimensions, similar to that given for Type I.

1. Philadelphia MS1821. Parts preserved: only the head. This specimen retains its colors better than any of the others, and it is from an examination of it that the color-scheme evolved above is derived.

¹ Case number, 253A.

2. Philadelphia MS1822. Illustrated in front view in Figure 6, in profile in Figure 3. Parts preserved: head, base, and about two thirds of the frame that separated the head from the "shell." A fairly good section of the cover-tile is preserved, with the buttress. This is the best preserved of all the specimens.

3. Philadelphia MS1823. Parts preserved: about one half of the base; the head, except for the left upper part, and from one third to one half of the frame separating the head from the "shell." The break in the head is very serious, the left eye and the greater part of the forehead being gone.

4. New York GR1138. Parts preserved: head and neck, broken off at junction of base; and about one half of the frame separating the head from the canopy. Next to Philadelphia MS1822, this is the best preserved of the four.

CHART OF DIMENSIONS OF ANTEFIXES FROM CORNETO, TYPE II

Example	Height Over All	Width Over All	Height of Head	Width of Head
Philadelphia MS1821.....	17.9	12.7	*	*
Philadelphia MS1822.....	24.3	19.8	18.0	13.1
Philadelphia MS1823.....	23.0	16.3	17.2†	10.1†
New York GR1138.....	22.6	21.3	18.4	13.1

All dimensions are in centimetres.

* Same as over all measurements.

† Dimension given as preserved.

The third type is female. It differs from Type I in certain details, but appears to belong in the same period. Only one example of this type exists in this country; it is in Philadelphia, No. MS1819¹ (Fig. 7). No trace of color remains on the antefix; the "shell," too, is broken off, so that there is no means of knowing what the ornament there was. This specimen appears in Figure 1.

The head is treated in much the same way as in Type I. The hair is parted in the centre, and is waved over the ears; at each side long tresses fall along the neck. On the head is a small diadem, and around the neck is a necklace, of a twisted, ropelike nature. Necklaces of this kind are often worn by the female figures on the lids of Etruscan sarcophagi and urns. Somewhat over one half of the base is preserved, but there is no trace of its decoration. Of the frame separating the head from the "shell," perhaps one half, all told, remains.

¹ Case number, 252D.

This antefix was considerably smaller, when complete, than those in the two preceding types, as the measurements of the head would indicate. As preserved, it has an over-all height of 19.4 cm., and an over-all width of 12.3 cm.; while the measurements of the head are: height, 13.3 cm., width 10.9 cm.¹

To these types already described, a fourth should be added for the sake of completeness. It is, however, in my opinion, of considerably later date. It appears in Figure 1, and is at present

in Philadelphia (Fig. 8), where it has the accession number MS1828.² It is a male antefix, with the head of a grinning satyr in the centre. It is very much the smallest of any in this group.



FIGURE 7.—ANTEFIX FROM CORNETO:
TYPE III.

The "shell" is very small, and seems to have been decorated with a palmette-lotus ornament. Only the bases of the palmettes remain, but in two instances the lotus is complete. The clay is buff, porous, and pebbly, and was originally covered with a white or cream-colored slip, most of which has disappeared. On this slip were painted the colors in which the various details were rendered. These, too, have largely disappeared, so that, on first

looking at the antefix, one is led to believe that it was never colored. The flesh, however, seems to have been red, including the eyes; the hair and beard were black, and the "shell" white on a red ground.

As regards preservation, we have noted that only the bases of the palmettes on the "shell" ornament remain. The canopy

¹ A comparison of these measurements with the norm for Type I, as given on the chart, shows roughly a ratio of 4 to 5 for the height, and 5 to 6 for the width, of the face.

² Case number, 249.

is also completely broken away at the right, and the nose of the satyr and part of his hair have been broken.

Coming to the style, Professor Frothingham, in acquiring this specimen, was inclined to place it at an earlier date than the antefixes just described. I venture, however, to differ from this belief, and, in confirmation of my point of view, would point to the fact that the "shell" pattern is late in design, while the satyr is modelled, as it seems to me, with a deliberate attempt at archaism. The modelling reveals knowledge not possessed by the truly archaic workers; and, therefore, I should be inclined to date this specimen in the second century B.C., or later. The small size of the antefix may also be regarded as pointing to the same conclusion.

This example has an over-all height of 19.7 cm., and an over-all width of 15.6 cm., while the head is 12.2 cm. high and 9.7 cm. wide. Where preserved, the "shell" has a width of only 7 cm. at the top, and 6 cm. at the side. It will at once be seen, from a comparison with the charts

for Types I and II, and the dimensions given for Type III, how much smaller this Type IV is than the others from Corneto.

We have now examined in detail all the objects in the group of architectural terra-cottas from Corneto. It would be interesting to be able to link this collection with any specimens of the same types existing in other museums, especially those of Italy.¹

STEPHEN BLEECKER LUCE.

NEWPORT, R. I.



FIGURE 8.—ANTEFIX FROM CORNETO:
TYPE IV.

¹ Besides the persons referred to in footnotes from time to time in the course of this article, I am under debt to the authorities of the University Museum for the permission to publish these antefixes. I am also under a very special debt to Mrs. A. W. Van Buren (E. Douglas Van Buren) for much help and friendly counsel. She has not seen this article, nor can she be held responsible for any of the errors with which it may abound; but in the preparation of this paper

and of the one on the antefixes from Cervetri (*A.J.A.* XXIV, 1920, pp. 352 ff.) I have attempted to follow in the paths indicated by her in many courteous and friendly letters, received during the winter.

No attempt has been made to bring this group under the Law of Dynamic Symmetry. The fragmentary condition of the objects precludes the possibility of making sufficiently accurate measurements to work out a theme in any root rectangles for them.

I wish also to make a correction to a statement made by me in my last article, where I said, erroneously as I now believe, that the antefixes from Civit  Lavinia represent our earliest type of "shell" antefixes. I believe now that the antefix in Perugia, published by Fenger (*Le Temple  trusco-Latin*, p. 12, figs. 37, 38) is earlier, as it recalls in many respects the "stephan " type of antefix found at Cervetri (*A.J.A.* XXIV, 1920, pp. 33, 34, figs. 7, 8). Compared to this specimen in Perugia, the examples from Civit  Lavinia have a very sophisticated look, which would make them, in my opinion, about a generation later. Points of comparison between the Perugia type and the "stephan " type will be found in the earrings, the dressing of the hair, and the diadem. It is just a "stephan " antefix with a canopy added.

THE CARDONA TOMB AT BELLPUIG

THE only way to know about anything is to go and look: this platitude, like other moral injunctions, is oftener repeated than applied. Yet nothing else will serve. The opinion of one's master, the description of one's companion, the best of photographs, will not yield the secrets that personal study on the spot can solve. The tomb of D. Ramon de Cardona, at Bellpuig in Catalonia (Fig. 1), is one of those monuments of art to which all manuals refer and which relatively few persons have seen. In consequence:—first, one book copies from another the unqualified attribution to Giovanni da Nola; second, it passes for imported Italian work; and thirdly, it is cited to prove that Spain was so dependent on Italy that her sculpture was not only copied but imported bodily. None of this is tenable in front of the tomb. On the contrary, after consideration it appears that



FIGURE 1.—TOMB OF D. RAYMOND OF CARDONA: BELLPUIG.

Spanish ideas were in control, and on investigation, thereafter, that Spanish influence in Naples may easily be accounted for.

Always on inspection unsuspected differences and likenesses become apparent. So, in Bellpuig, where by hearsay there was "only an overloaded Italian tomb," the strong sunlight directly after noon revealed, to one fresh from Naples and the abundant and known work of Giovanni da Nola, two distinct styles. An advantage of taking one's own photographs is that one has to stay and look at the object for several hours without intermission, and in that time, impressions are slowly formed. The mind is as sensitive as the photographic plate, but for neither is the best result instantaneous. The belief there formed and recorded in the notebook was that the Virgin a-top, the sarcophagus, the relief of a sea-fight, and perhaps the two friezes are by Giovanni da Nola. For the sirens and the half-length girls, with the pilasters, he is not responsible. From his designs, but not from his hand, are the *putti* and the Rachael and Leah figures, with the seated figures above, together with the scheme of the whole. The hypothesis would be that he prepared the drawings, under Spanish influence, in Naples, did the most important parts, and left the remainder probably to Genoese masters. On the base is carved: *Joannes Nolanus faciebat*.¹

Raymond of Cardona was victor at Mazalquivir in 1505, and the battle there is probably the sea-fight depicted on his tomb. In 1510 Ferrand I made him Viceroy of Naples; in 1513 he delivered Milan from the French and Genoa from the Venetians; in 1522 he died at Naples. The Franciscan convent of Bellpuig he had founded fifteen years before, the bull of Julius II being dated early in 1507. His widow, Doña Isabel Cardona y Requesens, ordered his tomb for that church from Giovanni da Nola and buried him meanwhile in Castelnuovo. Nine years later the body, still incorrupt, was received at Bellpuig "in a chest closed by two keys" and deposited in the great tomb.

On March 15, 1531, says a notarial act still in existence, "*positum fuit in monumentum in eadem Ecclesia situm, et sua effigie a famosissimo artifice Joanne de Nola, perfectissima arte construc-*

¹ There is a short study of Giovanni da Nola in Frizzoni, *Arte Italiana nel Rinascimento*, pp. 83-88. Various references are scattered through the volumes of *Napoli Nobilissima*; the passage cited later from Benedetto Croce's researches into the records of Spanish artists and craftsmen in Naples, will be found there, Vol. IV, p. 12.

tum.”¹ All travellers admired it: “the most sumptuous monument of the arts that there is in Catalonia,” said Ponz, and again, “coming back to Juan Nolano, he well deserves to be accounted as one of the great men who flourished when the noble arts were emerging from the shadows.”² Céan Bermúdez sets down under the year 1524, in his index of sculptors, “Juan Nolano in Cataluña.”³

When the convent was exclaustated the tomb was neglected, and opened casually to show to any chance traveller the tall body of the great Captain-General of the Church. Piferrer⁴ reported indignantly that a crowbar for this use lay across the sarcophagus: the golden sword of Julius II had disappeared at the time that the French went through. In 1809 they had come to Bellpuig, and with comings and goings stayed there about four months: they wrecked the church, violated the tomb, broke the statues, stole the gold hilt of the sword, and probably destroyed the banners which had been taken in great battles. When the French had gone the Spaniards, who were keeping Lérida, turned the convent into a military hospital and did more damage. From 1816 to 1829 the friars were restoring it, but in 1835 they were turned out and the townsfolk at leisure looted the place. At last the monument was transferred to the parish church; the work took from December 13, 1841, till May 11, 1842, and another notarial act certifies to the regularity of the translation, and preserves the names of the ducal representative, the clerical committee, and the municipal authorities, the masons and their assistants, and the supervising architect. The urns on the top were probably his invention, and parts of the dress of the hermes.

How badly the tomb had been damaged in 1809 and 1835 we have no way to know, but the work took fifty-nine cartloads of marble and much more of ordinary stone and building material. “A great altar fabricated of the said marbles and statues,” the document calls it, and in description is more concerned with preserving the inscriptions than itemizing the sculptures.

¹ Valeri Serra y Boldú, *Lo Convent de Bellpuig*, p. 15. The facts are drawn from this study and Piferrer's *Cataluña* (written in conjunction with Pi Margall and revised a generation later by A. A. Pijoan), II, pp. 259-312.

² Ponz, *Viaje de España*, XIV, letter v.

³ *Diccionario de los mas illustres profesores de las bellas artes*, VI, p. 109. There is no biography of Juan Nolano and I have been unable to discover the reference in the foregoing five volumes or to explain where he got the date.

⁴ Piferrer, *op. cit.* notes on pp. 309 and 312 f.

Of these inscriptions there are three: below, on the left, one says:—*Servavi thalamum genie dulcissime conjux, servandus nunc est pro thalamo tumulus.* Another, corresponding, on the right, reads: *Ornasti et manes lacrimis miserabilis uxor haud optare alias fas erat inferius.* The most important crowns the whole, where a pediment might be: *Raimundo Cardonae qui Regnum Neapolitanum prerrogativa pene regia tenens gloriam sibi ex mansuetudine comparavit, Ysabella uxor infelix marito opt. fecit. Vix.*

ann. XXXXXIII mens. VIII diebus VI. ann. M. D. XXII.



FIGURE 2.—CENTRAL PORTION OF TOMB OF D. RAYMOND OF CARDONA.

The tomb will recall to the traveller at first glance the two monuments by Sansovino in S. Maria del Popolo (1505-7), but the difference is great. It looks more like a triumphal arch or portal and the niche is deeper (Fig. 2). For the ecclesiastical figure dozing uncomfortably is substituted a young knight sleeping on his armor. This is a favorite motive in Spanish tomb sculpture, as

may be seen, for instance, among the almost nameless tombs in the south transept at Avila (Fig. 3). It is slightly modified in that of the Count of Tendilla (now in S. Ginés of Guadalajara), who died in 1479; or that, better known, at Sigüenza, of Martin Vázquez de Arce, whom the Moors killed in 1486.¹ The intention of it is, always, the Spanish ideal of knighthood. The depth of the recess is also a Spanish trait, for while Italian tombs have the

¹ The Avila tombs I have photographed, but I think they are unpublished; those of Guadalajara and Sigüenza may be found in the admirable work of Ricardo de Orueta, *La Escultura Funeraria en España*, in the volume for Ciudad Real, Cuenca and Guadalajara, pp. 110-160.

air of being developed from a wall slab, the Spanish derive from the *arcosolium*. The Gothic tombs of Leon, or Burgos, or of the Old Cathedral of Salamanca, show this, and show the tympanum under the arch occupied by a religious scene. Here the lunette is filled with a *Pietà*, equally suitable for its place in theme and in composition.

The statues that flank the recess are a trifle too large for their niches and the pattern on their bases recurs nowhere else. The one on the left, with oak bough and helmet, presents probably some allegory of strength in government and war; the one on the right, who has lost her hands and with them her attributes, shows more *recueillement* and stands probably for some aspect of faith. From roundels above emerge half-lengths of buxom nymphs, with



FIGURE 3.—TOMB OF A YOUNG KNIGHT: AVILA CATHEDRAL.

the laurel wreath and the olive bough. A pair of seated prophets or evangelists on top of the cornice are reduced to holding shields: that on the left is like a young warrior; the right-hand figure is brooding and very lovely. Over all a Madonna, up-borne in her mandorla of cherub-heads by gay young girl-angels, is perfectly Florentine.

The artist had thought it enough for the great admiral to set on his sarcophagus a frieze of marine deities, exquisite in design: the squatting, web-footed sirens which sustain it, though their funereal significance here is a curious survival of the Greek motive, are plastically an unhappy afterthought. In the spandrels above appear, on one side, the crane that occupies the same place at Ripoll, and on the other the pot of lilies that is the Virgin's *impresa* all over Spain. Now the cornice of cranes and lily pots is cer-

tainly from Giovanni da Nola's hand, and I am at a loss how to interpret it; the rest is plain enough, one side being given to the active and one to the contemplative life, and Our Lady set in the midst in her joy and her sorrow.

Giovanni da Nola lived in Naples all his days, working for Spaniards and with Spaniards. So much we know, but not much more.¹ At one moment in the church of Monte Oliveto, between Rossellino's lovely tomb and Benedetto's lovely altar, his art rises high as that of Girolamo da Santacroce, and, as tourists and compilers betray, you could not tell the one from the other. At S. Giovanni a Carbonara he was employed long, and Vasari, who also worked there and should know, says explicitly: "the altar-piece of that chapel [of the Marchese di Vico], in which are half-reliefs of the Magi making offerings to Christ, is by the hand of a Spaniard." Thence he proceeds to a story of a competition between this Spaniard and Girolamo da Santacroce.

In S. Giovanni a Carbonari work was going on from 1516 to 1557. The relief of Christ carried to his grave is by "Giovanni di Prato Spagnuolo," says Benedetto Croce. This sculptor is, however, usually referred to as the Spaniard Pietro delle Plate or da Prato,—for instance, by Eugène Müntz. His name was probably Pere Prat, which is good Catalan. He is presumably the man who built the parish church of S. Elmo in the Castle for D. Pedro de Toledo, the Viceroy's cousin, in 1547, where a stone still says: *Aedem hanc, opera et artificio Petri Prati Hispani Facundum cur idemque approbavit anno a Christi nato M D X L VIII*. He made also, perhaps, says Croce, the statues of the sepulchre of Andrea Bonifacio and G. B. Cicara (which Frizzoni attributes to Giovanni da Nola) in the church of S. Severino. The point is that there *was* a Spaniard, that Giovanni, exceedingly sensitive and variable, was subjected to Spanish influence directly.

"He made a tomb for D. Pedro de Toledo, Marquis of Villafranca, and his wife, who were then resident in Naples, in which he made an infinity of stories of the victories that lord gained over the Turks, with many statues which are in that work, all set separate and carved out with much diligence. It was to have been carried into Spain, but that not having been done in his

¹ Vasari, *Le Vite*, ed. Sansoni, 1880, V, pp. 93–96. Milanese (and certainly Perkins after him, *Handbook of Italian Sculpture*, pp. 366–369) relied on De Dominici, who was finally shown up by Benedetto Croce in 1893 in *Napoli Nobilissima*, I, p. 143.

lifetime, it stayed in Naples:" so Vasari. Coming upon it, behind the altar in S. James of the Spaniards, one feels instantly how Spanish it is. M. Müntz¹ feels that it proceeds from the tomb of François I at S. Denis, which is impossible; but there is some connection to trace between this and the tomb that Giovanni Giusti and his brothers made and set up in Tours for Louis XII and Anne of Brittany. That, however, is not the present purpose, which is strictly the Cardona tomb.

Of the elements of this composition there is no need to speak at great length. As already said, in general form it is less flat than the Florentine and Venetian tombs and more architectonic than the earlier Neapolitan. The formula on the whole is very near to the contemporary altars thereabouts, as Mino da Fiesole's tombs in the Badia and altar at Fiesole are reducible to one formula, or, similarly, Sansovino's S. Spirito altar and his Roman tombs. The relief on the base is found on Girolamo da Santacroce's beautiful altar at Monte Oliveto as well as Giovanni da Nola's pendant to that. It had already been employed on Donatello's tomb at S. Nilo, and was to be used on the tombs made for D. Pedro de Toledo, for Louis XII, and for François I. The critics who disallow Giovanni's historical low-reliefs on the tombs of great captains forget that these are legitimately inherited from the narrative reliefs of Donatello. The hermes and *putti* are found on Giovanni's altars at SS. Severino e Sosio; and *putti* even more like, and a Pietà less dramatic but more plastic, on another altar there, with a relief of the dead Christ below.

In the work on these altars and that done completely under Florentine influence at the church of Monte Oliveto, in 1536, Giovanni da Nola remains completely within the limits of space that the great Quattrocentists accepted—as though the statue were carved from an oblong rectangle of marble not very deep: this, indeed, is one of the secrets of their beauty, as with the early Greek "athlete" statues. The same thing is true of the flanking figures here. In the tomb of Julius II, the Rachael and Leah of Michelangelo are about the same in proportion as those of the

¹ *La Renaissance en Italie*, III, pp. 439–440. D. Ramon died in 1522, the tomb was set up in 1531; the tomb of Louis XII was on hand 1516–1532; D. Pedro built S. Giacomo degli Spagnuoli in 1540 and his tomb was finished before he died in 1556; François I died in 1547 and the tomb was completed in 1559; Gouse, *La sculpture française*, pp. 93–93.

Cardona tomb, but their sobriety, precisely, has led critics to question their date. The trait is archaic. On the other hand, in the half-figures of girls above, the Nolan has abandoned that canon. The unlikely things, and the unsatisfactory, like the substitution of a sea-shell for



FIGURE 4.—TOMB OF D. PEDRO HENRÍQUEZ DE RIBERA: UNIVERSITY CHURCH: SEVILLE.

an Ionic volute, and the trophies on the pilasters, do not look like Naples. They look, to say truth, like Genoa. Lombard and Ligurian taste relished things of that sort. One thing we know, that innumerable Spanish tombs were made up at Genoa;¹ from the marble quarries of Carrara it was easy to ship thither, and to Barcelona and Seville it was easy to ship thence. Bartolomé Ordoñez and many another stayed too long in Genoa on just such business.

As you sit and look, this tomb still seems less Italian than the account of it will read, with its dramatic relief set into the niche behind, as Spanish Gothic sculp-

¹ It is worth recalling Vasari: "This same marble then [of Pietrasanta] the moderns of today use for their statues, not only in Italy, but in France, England, Spain, and Portugal, as can be seen today in the tomb executed in Naples by Giovanni da Nola the excellent sculptor, for D. Pedro de Toledo, viceroy of that kingdom to whom all the marbles were presented and sent to Naples by Duke Cosimo de' Medici." *Vasari on Technique*, L. S. Macle hose and Baldwin Brown, p. 47. *Le Vite*, Sansoni edition, I, p. 120.

tors carved the funeral procession behind the defunct, for instance at Saragossa and Tudela, or enthroned the Saviour or His Mother in the lunette, as already said. Other like things may be found in Spain. There is still, in Seville, a pair of Ribera tombs (Figs. 4 and 5) made for the Charterhouse by the brimming river, and signed by good North Italians in 1520. Ponz,¹ who saw them there in the eighteenth century, copied out the inscriptions: *Antonius Maria de Charona hoc opus faciebat in Janua*; and the other, *Opus Pacegazini faciebat in Janua*. The former, Antonio Maria de Carona, was almost certainly living and working in Seville ten years later; it is probable that he went back and forth between Italy and Spain as business demanded. Gestoso y Perez² publishes an item to the effect that "Antonio Maria Ginovés" was paid for the step of the *altar mayor* and for the *trascoro* in 1534, adding: "Is he the Genoese sculptor Antonio Maria de Aprile de Carona? We incline to think so." The Gazzini similarly went to Sicily and worked for Spaniards there.



FIGURE 5.—TOMB OF DOÑA CATALINA DE RIBERA: UNIVERSITY CHURCH: SEVILLE.

¹ Ponz, *Viage de España*, VIII, pp. 236-237.

² Gestoso y Perez, *Ensayo de un Diccionario*, I, p. 221. Cf. Ricci, *Art in Northern Italy*, p. 236, on the Aprile and Gazzini families; also Di Marzo, *I Gagini e la Scultura in Sicilia*, passim.

The likeness of Aprile's tomb to that at Cardona will appear from the photographs, without need of discussion: by architectonic quality, by the decoration, the side statues, the lunette, the relief within the recess, above all, by the style in precisely such matters as acquaintance with Giovanni da Nola did not explain. So the Ribera tombs explain the Cardona, and confirm by their signatures what was conjectural there.

It has been proved, then, that of the tomb at Bellpuig the theme, the effigy, and the architectural use of a deep niche and reliefs are entirely Spanish, and while the symbolical figures, the Virgin, and the friezes are Neapolitan their significance is still Spanish; the rest was made up at Genoa, where many Spaniards were engaged, and whence the native workmen went often to Spain and came home and went back again.

Spanish ideas, then, were in control in this work, Spanish tradition was in communication, at Naples and Genoa alike, in the first half of the cinquecento; and all these are Spanish tombs, though executed in Italy.

GEORGIANA GODDARD KING.

BRYN MAWR COLLEGE.

ARCHAEOLOGICAL NEWS¹

NOTES ON RECENT EXCAVATIONS AND DISCOVERIES; OTHER NEWS

SIDNEY N. DEANE, *Editor*
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GENERAL AND MISCELLANEOUS

ARCHAEOLOGICAL DISCOVERIES IN 1919.—In *Cl. Journ.* XVI, 1921, pp. 271-279, G. H. CHASE reviews the results of archaeological investigation in 1919.

EPIGRAPHIC BULLETIN.—In *R. Arch.*, fifth series, XII, 1920, pp. 351-390, R. CAGNAT and M. BESNIER publish the text of 69 inscriptions relating to Roman antiquity. Of these 17 are in Greek, the rest in Latin. References to other recently published inscriptions are added.

MEASUREMENT OF SKULLS.—In *Sitz. Anth. Ges.* 1913-1914, pp. 9-26, J. SZOMBATHY reports on an international standardization of the measurement of skulls and heads, recommended by a commission appointed by the Thirteenth International Congress for Prehistoric Anthropology and Archaeology at Monaco in 1906.

HAINAN.—The Aboriginal Population.—In *Sitz. Anth. Ges.* 1913-1914, pp. 6-8, F. HEGER reports an investigation of the aboriginal population of the island of Hainan: their weapons, tools, clothing, ornaments, and wood-carving.

NECROLOGY.—Max van Berchem.—Max van Berchem, who was born in 1863, and died in 1920, was for many years engaged in the collection and study of Arabic inscriptions from Egypt and Syria, which were to be published as the initiatory volume of a *Corpus Inscriptionum Arabicarum* under the patronage of the Académie des Inscriptions et Belles-Lettres. He was also the author of a *Voyage en Syrie*. (*Syria*, II, 1921, p. 80.)

F. W. Hasluck.—F. W. Hasluck, who died February 22, 1920, in Switzerland, was appointed to the Cambridge Studentship in the British School at Athens in 1901. From 1906 to 1915 he served the School in the offices of Assistant

¹ The departments of Archaeological News and Discussions and of Bibliography of Archaeological Books are conducted by Professor DEANE, Editor-in-charge, assisted by Professor SAMUEL E. BASSETT, Professor C. N. BROWN, Miss MARY H. BUCKINGHAM, Dr. T. A. BUENGER, Professor HAROLD N. FOWLER, Professor HAROLD R. HASTINGS, Professor ELMER T. MERRILL, Professor LEWIS B. PATON, Professor A. S. PEASE, Professor S. B. PLATNER, Professor JOHN C. ROLFE, Dr. JOHN SHAPLEY, Professor A. L. WHEELER and the Editors, especially Professor BATES.

No attempt is made to include in this number of the JOURNAL material published after June 30, 1921.

For an explanation of the abbreviations, see pp. 108-109.

Director and Librarian. His final illness was probably hastened by his work for the British Legation at Athens during the war. His most important publications were a book on the history of Cyzicus and a series of articles on Italian influences in the Levant. Towards the close of his period of research his attention was absorbed by problems of the mutual influences of Christianity and Islam, and he gained a remarkably intimate knowledge of the sects of Asia Minor. (J. P., *B.S.A.* XXIII, 1918-1919, p. xvi.)

Morris Jastrow, Jr.—Morris Jastrow, Jr., eminent authority on Babylonian religion, died suddenly at Jenkintown, near Philadelphia, June 22, 1921. He was born in Warsaw, Poland, August 13, 1861, graduated at the University of Pennsylvania in 1881 and received the degree of Ph.D. from the University of Leipzig in 1884. He was professor of Semitic languages at the University of Pennsylvania, a position which he had held for many years. His more important works are: *The Religion of the Babylonians and Assyrians*, 1898; *The Study of Religion*, 1902; *Die Religion Babyloniens und Assyriens* (3 vols.), 1902-1912; *Aspects of Religious Belief and Practice in Babylonia and Assyria*, 1911; *Hebrew and Babylonian Traditions*, 1914; *The Civilization of Babylonia and Assyria*, 1915; and *The War and the Bagdad Railway*, 1917. He published a large number of articles in the fields of Semitic archaeology and philology, the most recent being a discussion of the newly discovered Assyrian code of laws. (W. N. B.)

Robert Munro.—The archaeologist Robert Munro died July 18, 1920, at Elmbank, Scotland, in his 85th year. He was the author of a well-known work on the archaeology of Bosnia and Dalmatia, of numerous books and articles on prehistoric archaeology, and the most complete existing monograph on the lacustrine stations of Europe (1890). He taught at Glasgow and Edinburgh. He was secretary of the Scotch Society of Antiquaries and a member of the Royal Academy of Ireland. (*S. R.*, *R. Arch.* XII, 1920, p. 332.)

Leon de Vesly.—Born at Rouen, June 22, 1844, Leon de Vesly died in his native city in November, 1920. After serving in the war of 1870-1871 and traveling for a time, he settled at Rouen in 1878 and began his career as teacher of drawing. He conducted and encouraged excavations and was the author of many articles and monographs, chiefly on prehistoric antiquities. He was conservator of the departmental Museum of Antiquities, and held other similar positions at Rouen. (Georges Duhose, *R. Arch.* XIII, 1921, pp. 139-141, from the *Journal de Rouen*, Nov. 26, 1920.)

PLEVEN.—**Diana Germetitha.**—In *Jh. Oest. Arch.* I. XVI, 1913, Beiblatt, cols. 205-208 (fig.), G. KAZAROW publishes the following inscription on an altar found at Pleven, Bulgaria, in 1910: *Deanae (sic) Germetithae sacrum M. Julius Niger voto posuit*. The name Germetitha is new and is, perhaps, Thracian. It may have been the name of a local goddess later identified with Diana.

SHANGHAI.—**The Honan Relics.**—At Shanghai in the Chien Shou T'ang building there is a collection of inscribed bone fragments bearing archaic Chinese inscriptions of the period of the Shang dynasty. These have hitherto eluded decipherment, but the key has recently been discovered by Mr. Wang Kuo-wei of Hai-hing Chou. This consists in the identification of eight personal names in these tablets with names in a list of ancestors of T'ang the Victorious, the founder of the Shang dynasty, preserved by Ssü-ma Ch'en. This discovery is reported by L. C. HOPKINS, *J.R.A.S.* 1921, pp. 29-45 (pl.).

THRACIAN ARCHAEOLOGY.—In *R. Arch.*, fifth series, X, 1919, pp. 133–172 (fig.), GEORGES LEURE continues his series of articles on Thracian archaeology with the publication of nine epitaphs, five of which commemorate Roman soldiers. Three of these died at Oescus. Of those, two (C. Roscius, C. f., Anieusi, Kapito, Troade, and P. Scribonius, P. f., Collina tribu, Epheso, Varus), veterans of the legio V Macedonica, died in the first century A.D., the third (name lost, but son of Maximinus Pannonius) in the third century. The tombstone of a Gallic cavalryman who died at Augustae in the first century A.D., bears a relief of a cavalry soldier, which is clearly affected by reliefs of the “Thracian Horseman.” The article contains remarks concerning the history of the legio V Macedonica, concerning the *alae* (especially the *ala Capitonis*), and some points of topography. *Ibid.* XIII, 1921, pp. 108–126 (4 figs.), GEORGES LEURE continues his publication of unpublished or little known monuments in Thrace. A silver statuette in the museum at Sofia (cf. *Arch. Anz.* 1911, pp. 363 f., figs. 7, 8), representing a child holding a dog, is explained as a spice-box. It is compared with a statuette in the Collection Clercq (*Catalogue, Bronzes*, III, p. 106, No. 164; cf. a third statuette, *Cat. of Bronzes in the British Museum*, No. 5685), which is of Syrian origin. The statuette in Sofia was found in 1909 at Nicolaevo, district of Pleven, together with many other objects, chiefly of gold and silver. The treasure seems to have been hidden at the time of the Gothic invasion. The date is 248 A.D. All these objects are probably of Syrian manufacture, rather than local manufacture under Syrian influence.

EGYPT

ALEXANDRIA.—The Alexandrian Mint, 308–312 A.D.—At an unnamed time and place a find is said to have been made of two bushels (!) of *folles*, ranging from Domitius Domitianus to Maximinus Daza. Of these coins a selection is described by PERCY H. WEBB in *Num. Chron.* 1920, pp. 208–215. It comprises from the Alexandrian mint 43 coins of Galerius, 190 of Maximin, and 5 of Galeria, together with about 25 coins of the same rulers from the mints of Antioch, Nicomedia, and Cyzicus. The Alexandrian coins were mostly in fine condition, and their weights are, therefore, of importance and are carefully recorded. Not a single case of identity of dies was observed. In coins of the mint at Nicomedia the letters CMH, usually taken as a sign of value, were found on pieces of decidedly different weights and modules. This tends to upset belief that these coins represented intrinsic values.

EL-KUR’UH.—Tombs of the Ethiopian Kings.—In *B. Mus. F. A.* XIX, 1921, pp. 21–38 (41 figs.) G. A. REISNER publishes a preliminary report on the excavations of the Harvard University-Museum of Fine Arts Expedition at El-Kur’uh in the Sudan in 1918–1919. The tombs of all the kings of Ethiopia from the establishment of their monarchy to its end (750–250 B.C.) were discovered. In construction they illustrate successive stages of evolution from the tumulus grave of the first king to the three-room stairway pyramid of his remote successors. The chalcedony arrow-heads discovered in the tumulus of the earliest chieftain of this Ethiopian dynasty are of Libyan form, and suggest that the royal family of Ethiopia was of Libyan origin. It probably grew to power through its strategic position on the trade routes between Egypt and

Central Africa. Although the tombs were looted in ancient times, many objects of great beauty and interest were found by the excavators. They indicate that the supposed revival of Egyptian art in the Saite period was not so sudden and unprepared as has been believed; that in fact the tradition of good technique had never wholly perished in Egypt. The possibility of Greek influence in the production of Saite art also seems more remote than before. The objects illustrated in Dr. Reisner's report include arrow-heads, tomb-paintings, necklaces of gold and precious stones, blue faience amulets, stone jars, Canopic heads, and ivory inlays.

FARAS.—*Excavations of the Oxford Expedition.*—In *Ann. Arch. Anth.* VIII, 1921, pp. 1-18 (5 pls.) F. LL. GRIFFITHS reports on the excavations of the Oxford Expedition in Nubia, 1910-1913, on the borders of Egypt and the Sudan. At Faras, about twenty-five miles north of the Second Cataract, were discovered village remains and a cemetery of the Protodynastic age. The traces of the village were slight. It may never have had walls of brick or clay. Potsherds with comb impressions, flint flakes and some other objects indicated the site of the settlement. About two hundred meters farther in the desert 116 graves were excavated. These were narrow and shallow pits, oval and approximately rectangular, with no trace of roofing slabs. Most of them had been plundered in ancient times. The skeletons were contracted and lay on the left side with the head to the south. The pottery in the cemetery was all hand-made. The Egyptian wares included large jars of pink clay, mostly undecorated, a few "wavy-handled" jars, and flat-based bowls. The native wares are softer. Some examples were brown throughout, but the most common had a black core and a brownish or reddish surface. Bowls were sometimes colored with haematite mixed with the clay. Some were painted with haematite, burnt red outside and black inside. There were some examples of the "variegated" haematitic ware which is found in Nubia. Few stone vases were found. Some copper chisels and awls, a copper axe-head, and beads and other ornaments were discovered. It appears that such civilized settlements as this in Lower Nubia were of short duration.

GHÔRAN.—*A Demotic Papyrus.*—In *C. R. Acad. Insc.* 1920, pp. 223-231, H. SORTAS interprets Demotic Papyrus III of Lille, discovered on the site of Ghôran, southeast of the Fayûm. It is a contract guaranteeing to the wardens of a prison the presence of certain persons at an appointed time. Probably prisoners were released for private service to proprietors who made such engagements. The principal interest of the papyrus lies in the fact that it annexes the five "epagomenic" days to the last month of the year.

TELL-EL-AMARNA.—*Transference of the Direction of Excavations.*—In the *Journal of the Manchester Egyptian and Oriental Society*, IX, 1921, p. 19, it is announced that the concession of the site of Tell-el-Amarna has passed from the Deutsche Orientgesellschaft to the Egypt Explorations Society, and that investigations on this site will be conducted by Professor T. E. Peet of the University of Liverpool, assisted by F. G. Newton, architect.

THEBES.—*Graffiti from the Valley of the Kings.*—In *C. R. Acad. Insc.* 1920, pp. 107-116, J. BAILLET describes the graffiti in the tombs of the Valley of the Kings near Thebes. He has collected more than 2000 of these. The greater number are inscribed on empty spaces of the walls, or in corners of the pictures; some actually deface the decorations of the tombs. Graffiti have been

found in ten of the forty-five known tombs, probably those which were most accessible and oftenest shown to travellers. The positions of some of these signatures have shown that the *talus* of debris which half closed the tombs is not of modern or mediaeval origin, but existed before the Ptolemaic period. The names represent a great variety of nationalities—Egyptian, Carthaginian, Greek, Roman, Thracian, etc., and show that visitors to the tombs came from all parts of the Mediterranean world, even from Massilia and Spain. Many professions and occupations are mentioned. It is impossible to identify with certainty the signature of any celebrated man. Many visitors recorded not only their names, but expressions of admiration of the tombs, or of some sentiment or belief.

BABYLONIA AND ASSYRIA

ASSHUR.—An Assyrian Law Code.—The German excavations at Asshur, the ancient capital of Assyria, during the years 1903–1914, disclosed an Assyrian law code dating from about 1000 B.C. This has been published by D. SCHROEDER in *Keilschrifttexte aus Assur verschiedenen Inhalts*, Leipzig, 1920. In *J.A.O.S.* XLI, 1921, pp. 1–59, M. JASTROW, JR., discusses and translates the fifty-five sections of the chief tablet and the eighteen sections of the second tablet. The code is nearly a thousand years later than the Code of Hammurabi, but it is similar to it in the general features of its jurisprudence. Its punishments, however, are much more barbarous than those of the older code. Among these we find with nauseating frequency the cutting off of the ear or the nose or both, or boring the ear or mutilating it, or mutilating the entire face, lashes varying in number from twenty to one hundred blows, castration in two instances, public exposure by taking an offender's clothes away, and in one case impalement.

Religious Texts.—In *Z. Morgenl. Ges.* LXXIV, 1920, pp. 175–191, E. EBELING gives a number of transcriptions and translations of interesting religious texts recently discovered by the German expedition at Asshur. These include an incantation for appeasing the anger of a stranger, an incantation against hostility, an incantation against disease, a ritual of exorcism against disease, and an exorcism of a ghost.

LAGASH.—Ancestor-Worship in the Time of Lugalanda and Urukagina.—In *Orientalia*, II, 1921, pp. 32–51, B. DEIMEL publishes twenty-five tablets from the archives of the temple of Bau in Lagash which contain lists of offerings made by Barnamtarra and Shagshag, the consorts of Lugalanda and Urukagina, to the ancestors of their dynasties. Sixteen of the tablets are lists of sacrifices presented to the *manes*, seven treat of sacred vessels and garments with which the statues of the ancestors were clothed on feast days, two are labels for tablet holders, from which it appears that tablets of this sort were known as *en-ni-ne*, "ancestors." The contents of these tablets are of great importance for the history of ancestor-worship in Babylonia.

SYRIA AND PALESTINE

PROJECTED EXCAVATIONS.—The High Commissioner of the French Republic in Syria, in accordance with the advice of the Académie des Inscriptions et Belles-Lettres, has commissioned M. Maurice Pézard to conduct excavations at Tell Nebi Mindau, the site of the Hittite Qadesh; M. Camille Enlart to study the mediaeval monuments of Tartus, M. G. Contenau to continue excavations at Sidon, and M. de Lorey to direct excavations at Tyre. (*Syria*, II, 1921, p. 80.)

ABU-GHOSH.—**Discovery of an Ancient Tomb.**—In *R. Bibl.* XXX, 1921, pp. 97–102 (2 pls.; 3 figs.), F. M. ABEL describes an old Palestinian tomb discovered at Abu-Ghosh, near the ancient Kirjath-Jearim. It is excavated in the face of a rocky ledge, and consists of a central depression surrounded by a broad bench on which the bodies were laid. The entrance was so skilfully concealed that the tomb had not been opened since the Graeco-Jewish period. A figurine and a large amount of pottery of this period were found in it intact. The tomb itself belongs to a much earlier period, having been violated and robbed of its earlier contents, except for a few fragments, at the time of its use in the Greek period.

ASKALON.—**Excavations of the Palestine Exploration Fund.**—Excavation on the site of the ancient Philistine city of Askalon was begun by the Palestine Exploration Fund, under the direction of Dr. Garstang, in August, 1920. Near the surface remains of a Crusaders' church were discovered, and a Byzantine church, presumably of the eighth century, with fragments of Greek and Cufic inscriptions. There was also unearthed the foundation of a temple, or other public building, in the best Roman style, constructed entirely of Greek and Italian marble. Here two fine statues of Fortune and of Victory were discovered. A pool was also uncovered which seems to be identical with the "Well of Peace" mentioned by Antoninus Martyr in the sixth century, and the discovery here of a potsherd representing a man fishing raises the question whether this is not the site of the more ancient fish-pond and sanctuary of Derceto, or Atargatis. A series of exploratory trenches has also been dug, which have yielded specimens of the local ceramics of every period from post-Neolithic up to Roman. These discoveries are described in *Pal. Ex. Fund.*, LIII, 1921, pp. 12–16, 73–75 (5 pls.).

BEIRUT.—**A New Museum.**—A museum has been organized at Beirut by the French Service des Antiquités et Beaux-Arts de Syrie, under the direction of C. Virolleaud. (*Syria*, II, 1921, p. 80.)

JERUSALEM.—**The French School.**—By a recent decision of the Académie des Belles Lettres et Inscriptions, the *École biblique de Saint-Étienne* at Jerusalem will be known henceforth as the *École Française Archéologique de Jerusalem*. Excavations at 'Ain Duk are contemplated. (*Syria*, II, 1921, p. 79.)

Organization of Archaeological Research.—In *Ann. Arch. Anth.* VIII, 1921, pp. 61–62, J. GARSTANG gives a brief account of the measures which the British Administration of Palestine has taken to protect antiquities and to encourage archaeological study. A Palestine Museum which is being organized at Jerusalem will exercise the right of selecting objects needed for its collections from the finds made in excavations. The three established schools of archaeology in Jerusalem (British, French, and American) have arranged for collaboration in

instruction and in the use of libraries; and a common building will house the Government Department of Antiquities, the British School, the Library of the American School, and the Museum.

TIBERIAS.—Excavations.—In *Syria*, II, 1921, p. 80, it is reported that in excavations at Tiberias under the direction of Naoum Slousch the site of the *Kenashta dehamata*, or synagogue of Rabbi Mait, has been discovered. A number of Jewish tombs have also been found, including that of Isidorus, a member of the Sanhedrim. The inscription on this tomb was in Greek.

ASIA MINOR

EPHESUS.—Honorary Decrees.—In *Jh. Oest. Arch. I.* XVI, 1913, pp. 231–244, J. KEIL discusses a series of honorary decrees from Ephesus, which date from the fourth and third centuries B.C. Most of them were discovered in 1912.

Excavations of the Austrian Archaeological Institute in 1913.—In *Jh. Oest. Arch. I.* XVI, 1913, Beiblatt, cols. 89–92 (10 figs.) E. REISCH reports upon the excavations of the Austrian Archaeological Institute at Ephesus in 1912 and 1913. These included the uncovering of an important place for distributing water south of the odeum and further examination of the stadium, the north side of the Roman as well as the Greek market-place, the wall of Lysimachus, the so-called temple of Claudius, the name of which is still uncertain, and the remains of the large building lying under the double church excavated in 1904 and 1907. This proved to be the basilica where the oecumenical council met in the year 431.

A New Inscription of C. Rutilius Gallicus.—In *Jh. Oest. Arch. I.* XVII, 1914, pp. 194–199 (fig.) J. KEIL calls attention to a statue base found at Ephesus in 1913 bearing the name of C. Rutilius Gallicus celebrated by Statius. He also gives a brief account of his career.

A Sarcophagus with Scenes from the Lower World.—In *Jh. Oest. Arch. I.* XVII, 1914, pp. 133–144 (pl.; 7 figs.) J. KEIL publishes two sarcophagi found by him in a tomb at Ephesus in 1907. The long sides of one, which is badly broken, were decorated with three garlands of fruit separated by two small figures on pedestals. At the corners were winged Victories. The second sarcophagus has on the front and ends scenes from the lower world. The back is plain. Above a socle which is supported by seven putti who hold up garlands of fruit there are nine figures, besides winged Victories with fruit and flowers at the corners. In the centre stand a man and a woman, both portraits. At the right are Hades and Persephone seated and Hermes Psychopompus standing before them. To the left of the pair in the centre is a group consisting of a young woman seated with two others standing on either side of her. These probably represent the Fates. Further to the left there is another female figure who stretches out her right hand to the fruit which the Victory is holding, while with her left she grasps three ears of grain. She may represent one of the initiated. On the end of the sarcophagus at the left, above a boucranon and garlands, which were never finished, are three nude youths in a boat. On the right hand end a rough looking man with a stick in his left hand is coming out of a vaulted passage, while to the left a young woman with her himation

stretched out as if to protect her is darting back. Both sarcophagi date from the second century A.D.

The Chiliasteis of Ephesus.—In *Jh. Oest. Arch. I.* XVI, 1913, pp. 245–248, J. KEIL publishes a complete list of the *χίλιαστεῖς* of Ephesus so far as known. It includes several new names.

MAGNESIA ON THE MEANDER.—A Hellenistic Grave Stele.—In *Jh. Oest. Arch. I.* XVI, 1913, pp. 178–182 (pl.; 2 figs.) J. KEIL publishes a marble grave stele 2.20 m. high and 0.75 m. wide found near Magnesia on the Meander. The upper part is in the form of a *naiskos* in which is the bust of a young woman. On the lower part of the slab is a cutting intended to represent the entrance to the tomb. It dates from the first half of the first century A.D.

MELAMPAGUS.—Recent Discoveries.—In 1880 Sir W. M. Ramsay found on Mount Sipylus an inscription marking the boundary between Heracleia and Melampagus. In *Jh. Oest. Arch. I.* XVI, 1913, Beiblatt, cols. 163–168 (4 figs.) J. KEIL describes the remains of Melampagus which are still to be seen. They consist of a finely built polygonal wall, walls of squared stones, a scarped sub-structure for a wall, various house walls, etc. They date from Greek and Hellenistic times.

GREECE

ATHENS.—A Double Relief from the Acropolis.—In *Jh. Oest. Arch. I.* XVII, 1914, pp. 121–132 (pl.; 5 figs.) ADA VON NETOLICZKA discusses a slab of Pentelic marble found in a late part of the wall of the Acropolis in 1910. It has on one side a figure of Athena in high relief, and on the other a winged Athena in low relief.

The Procne Group on the Acropolis.—In *Jh. Oest. Arch. I.* XVI, 1913, pp. 121–140 (10 figs.) C. PRASCHNIKER describes a head of Parian marble split across the face so that the right hand side is missing. It had once been built into a wall, as it was covered with mortar when found. It fits the torso of a draped woman beside whom stands a small boy. A bronze fillet or crown was once attached to the head. The group dates from the time of the Parthenon sculptures and represents Procne and Itys, as Michaelis thought long ago. Whether the figures are to be identified with the group on the Acropolis seen by Pausanias (I, 24, 3) is uncertain. They may have been a sketch by Alcamenes.

The Endowment of the American School.—The Carnegie Corporation has made a grant of \$100,000 for the endowment of the American School of Classical Studies at Athens, on condition that between January 1, 1920, and July 1, 1925, the School shall raise an additional sum of \$150,000.

CRETE.—A Stag-horn Head.—A piece of the shed antler of a stag, about 12 cm. long, cut at one end to fit on the end of a staff and with a quaintly carved face under the projecting natural burr of the severed end, is said to have been brought from Crete, and is probably Minoan in origin. It shows resemblances in style or subject to one of the gold masks from the Cretan shaft graves at Mycenae, to the head of the ivory goddess in Boston, to a terracotta head from Mochlos, and to various Cretan reliefs and frescoes, and it may

be tentatively dated at about 1600 B.C. The bone is almost petrified with age. It is now in the British Museum (E. J. FORSDYKE, *J.H.S.* XL, 1920, pp. 174-179; pl., 3 figs.)

DELPHI.—The Argive Offerings.—In *R. Ét. Gr.* XXXII, 1918, pp. 41-61 (6 figs.) ÉMILE BOURGUET reports the discovery by F. Courby at Delphi of three stones bearing the last part of an inscription which recorded the dedication of a tithe from spoils taken from the Lacedaemonians. This inscription is from the base of the colossal bronze representation of the Wooden Horse, dedicated by the Argives after the battle of Thyrea (Paus. X, 9, 12). A considerable number of blocks from the several courses which formed the base of this monument have been found, including a slab with a cutting for a hoof of the Horse. The base was 1.58 m. in height, and stood with its longer axis perpendicular to the Sacred Way. It was 6.20 m. long and 2.70 m. wide. The inscription may with probability be restored as follows: [Ἀργεῖοι τὰ πᾶλλον] ἀπὸ Λακεδαιμόνων δεκάταν. The block with the inscription Ἀργεῖοι found in earlier excavations at Delphi (*Fouilles de Delphes*, III, 1, fig. 24, pp. 56-57) though of the same material as the inscribed blocks found by M. Courby, and of nearly contemporary date, is not from the same monument, since the style of lettering is somewhat different, and the stone differently finished. It belongs to a massive base of which some parts have been identified. The measurements and dowel-holes of these justify the restoration of a structure 7.05 m. long and 3.627 m. wide, which seems to have stood to the east of the Horse. This base probably supported the statues of the Seven against Thebes and the chariot which Pausanias describes as Argive offerings (X, 10, 3). It is possible that the group of seven chieftains and the chariot were originally on separate pedestals, but after the dedication of the Horse were combined on a pedestal which was raised so high as not to be too much overshadowed by the Horse. The use of two different kinds of dowels in the base suggests some sort of adaptation of material from an earlier monument. The battle commemorated by the Horse was that of 414 B.C., and not the famous combat at Thyrea described by Herodotus (I, 82). Perhaps the spoils of this victory in the Peloponnesian War were sufficient to permit not only the dedication of the Horse but the re-installation of earlier monuments indicated above.

ELIS.—The Excavations of 1911-1912.—In *Jh. Oest. Arch.* I. XVI, 1913, Beiblatt, cols. 145-152 (6 figs.) O. WALTER reports upon the excavations of the Austrian Archaeological Institute in Elis in 1911-1912. Walls were found which appear to have belonged to a gymnasium. A long, narrow building with a row of columns in the middle running east and west also came to light, and west of this a great colonnade running north and south. The foundations of a small building about 12 by 16 metres dating from the first half of the fifth century B.C. were also discovered. This may have been a treasury.

MESSENE.—Inscriptions.—In *Jh. Oest. Arch.* I. XVII, 1914, pp. 1-20 (9 figs.) A. WILHELM discusses two long inscriptions from Messene, one a decree in honor of a certain Aristocles, γραμματεὺς τῶν συνέδρων; the other dealing with the eight obol tax.

THASOS.—A Colossal Kriophoros.—In *C. R. Acad. Insc.* 1920, pp. 218-223 (2 figs.), E. POTTIER describes an unfinished statue of the second half of the sixth century B.C., found at the base of the east wall of the acropolis of Thasos, and recently recovered in excavations by the French School of Athens. The statue

is of island marble, and, including the base, is 3.50 m. in height. Its attitude is in general that of the "Apollos," but the arms held a ram in front of the figure. It is, perhaps, a statue of Apollo Karneios, protector of the flocks. The face is unfinished. A crack in one side of the statue accounts for the fact that it was left uncompleted. In its slender proportions (the height is about seven times that of the head), its study of physical detail, and the decorative treatment of the hair it shows the influence of the Chian school, and proves its relationship to such works as the Apollos of Melos and Tenea and the Caryatides of Delphi.

ZYGOURIES.—**Excavations of the American School.**—During April and May 1921 excavations were conducted by the American School of Classical Studies at Athens at Zygouries, a low mound near the village of Hagios Vasilios, about half way between Corinth and Mycenae, where prehistoric remains had previously been discovered. A considerable amount of fresh material for the study of pre-Hellenic Greece was brought to light, including objects dating from the Early, Middle, and Late Helladic Periods. The yield of pottery was extremely gratifying. The number of vases more or less complete exceeds 500, among which Early and Late Helladic fabrics, especially, are richly represented.

Numerous stone foundation walls of buildings provide much new information regarding the architecture of the Early Helladic Period. A group of houses uncovered indicate that, while the plans are irregular and show no uniformity, each house usually possesses a characteristic square chamber, quite different from the long rectangular megaron of Mycenaean times. All the buildings of the Early Helladic Period laid bare are quadrangular, and no curved walls were found. The houses are for the most part small, built close together, and separated from each other by narrow, crooked streets.

Among other important finds of Early Helladic date, and especially noteworthy because they are the first of their kind to be found on the Greek mainland, are a small female figurine and a button seal, both of terra-cotta, and a fine bronze dagger in splendid condition. The handle of the latter is missing, but the four rivets which once fastened it to the tang are still preserved.

The most important objects of the Middle Helladic Period were found in a cist grave, namely, a necklace of beads of crystal and glass paste, a number of coils and rings of bronze wire—presumably used for fastening the hair—two bone pins, and two vases of dull painted ware.

A potter's shop, containing a fairly complete stock in trade, proved the most interesting discovery of the Late Helladic Period. Two rooms connected by a doorway, in which there is a huge stone threshold, were cleared, and were found filled with vases, many of them standing in high stacks, one vessel inside another. These vases, all of the Third Late Helladic style, and all perfectly fresh and unused, include 5 large, deep craters, 3 gigantic and 9 smaller stirrup vases, more than 275 unpainted deep bowls for cooking purposes, about 75 diminutive saucers, 20 small jars, not less than 40 painted cylixes, and ladles, cups, jugs and coarse pots in lesser quantities. The majority were in fragments as a result of the fire which had destroyed the building, but a good many were removed unbroken. Among other objects deserve to be mentioned a slender knife with an ivory handle, a steatite gem, and fragments of painted wall-plaster. All the finds from Zygouries have been transported to Old Corinth. (C. W. BLEGEN.)

ITALY

INSCRIPTIONS.—In *Not. Scav.* XVII, 1920, pp. 98–102, P. STICOTTI reports the discovery of a Greek inscription at Brestovizza and of Latin inscriptions at San Rocco-Castagnaretta and S. Geltrude, both in Reg. X. One of the Latin inscriptions records a vow of the second legion, called *Adiutrix*. On pp. 107–109 Sticotti publishes an inscription and four fragments from Pola and its vicinity, and an inscribed Roman sarcophagus from Sissano.

AOSTA.—A *Sepulcretum*.—In *Not. Scav.* XVII, 1920, pp. 97–98, P. BAROCELLI reports the discovery of a Roman *sepulcretum*. The tombs, which were evidently those of poor people, were arranged in no special order. A few small objects were found, some of which had been purposely broken.

AREZZO.—Brick Walls and Terra-cottas.—In *Not. Scav.* XVII, 1920, pp. 167–215, LUIGI PERNIER gives an account of the unearthing of a portion of the brick city walls of Arretium. These walls, mentioned by Vitruvius, II, 8, 9 and Pliny, *Nat. Hist.* XXXV, 170–173, have received little attention from writers on archaeology, in spite of the fact that some large bricks have come to light, measuring two feet in breadth and two inches in thickness (Roman). Systematic excavations for the purpose of finding the walls were begun in 1916 at Fonte Pozzulo, were interrupted after a short campaign, but were renewed in 1918 and continued until 1920. Since the results at Fonte Pozzulo were negative, the work was transferred to Catona, where an area of about 400 square metres was explored, with the result of discovering remains of the walls which in places rise to 1.30 m. and are perfectly preserved to a height of .60 m. The wall is shown by the finds to be earlier than the period of the Arretine vases, and it may, perhaps, date from that of the Etrusco-Campanian vases in the early third century B.C. (Vitruvius refers to the walls as *vetusti*). They differ from other brick walls, such as those of Athens and Sparta, in not resting on a stone foundation, and in being made of bricks which are not sun-dried but slightly burned, so as to give their surface a reddish color. The dimensions of the bricks are $1\frac{1}{2}$ feet by 1 by $\frac{1}{2}$ (Roman). In the course of the excavations numerous objects were found, including architectural members in stone, mosaics, vases and bronzes, and terra-cotta ornaments, both stamped and modelled by hand. The most interesting finds were antefixes and acroteria, and terra-cotta figures in the round or in high relief. The figures fall into four groups, distinguished from one another by the color and quality of the terra-cotta and by their firing. Group I is marked by a fine, compact material of a greenish-gray color, like that of the Arretine vases before they were baked, with small brown grains scattered through it. It includes the head of a youth about half life size (height .14 m.), which, after being modelled by hand, was retouched in several places with a wooden instrument, to improve the finish. There are traces of color only on the hair and on a fillet which confines it, and these are respectively a dark blue tending to brown and a light green. The head is of the Scopasian type with Hellenistic exaggeration of details (Fig. 1). It represents a beardless youth with a considerable growth of hair on the cheeks, with low forehead, deep-set eyes in which the pupils are not indicated, eyebrows prominent and strongly arched, the nasal bone strongly indicated, and the mouth partly open. It may represent a youthful Hercules or, perhaps, a sovereign, since it is similar to portraits which occur on coins of the third pre-

Christian century. The head itself is assigned to the middle of the second century B.C.

Another representative of this group is a fine head of a woman in a Phrygian cap (Fig. 2). The proportions are the same as those of the head just described



FIGURE 1.—TERRA-COTTA HEAD: AREZZO.

and it may be the work of the same artist. The flesh was painted white and some slight traces of the color remain. The head is thrown back on the left shoulder and the face uplifted, as if to implore aid. It may represent a Niobid or a dying Amazon. A part of the back of both these heads is unfinished, indicating that they were to be fastened to a background, perhaps a pediment, in such a way as to offer a three-quarters view.



FIGURE 2.—TERRA-COTTA HEAD: AREZZO.

Group II is distinguished by very fine terra-cotta of a reddish-yellow hue. The surface is polished and has taken on a bright patina, and the baking is perfect and uniform. To this group belongs the head of a youth in a Phrygian cap ornamented with ribbons (Fig. 3). The head is nearly two-thirds life size and is finished on all sides. The face, which is perfectly preserved, although somewhat feminine in its features is that of a young man. The pupils of the eyes are indicated and there are traces of red on the face and hair. In finish this head is comparable with the best work of the Faliscan artists of the early third century before our era. It is an Apollo type, but with Etruscan characteristics, and may, perhaps, represent Paris.

Another head belonging to this group is that of a woman in a Corinthian helmet. This also is finished on all sides and it has traces of red on the hair and on the cheek-pieces of the helmet. The other two groups, to be distinguished from I and II by the quality of their material, are represented for the most part only by fragments.

An Old Well.—In *Not. Scav.* XVII, 1920, pp. 215–217, ALESSANDRO DEL VITA reports the discovery, in connection with the excavation of the brick city wall, of an old well at Catona, at the bottom of which were many fragments of pottery designed to form a rough filter. Although of no artistic value, the fragments throw some light on the history of local ceramics.

CORCHIANO.—Two Faliscan Tombs.—In *Not. Scav.* XVII, 1920, pp. 20–30, G. BENDINELLI gives an account of the discovery of two Faliscan chambered tombs at a place called "Lista," about two kilometres from Corchiano, during excavations carried on between January 24 and March 18, 1916. In one of the tombs, which were in a ruined condition, there was found a large number of vases and fragments belonging to three different epochs, the archaic, the Faliscan, and the Etrusco-Campanian. Among the last named was a red-figured crater, .325 m. in height and .350 m. in diameter, having on one side representations of the resurrection of Adonis and of the Leda myth, separated by



FIGURE 3.—TERRA-COTTA HEAD: AREZZO.

a series of volutes. On the opposite side a Nike in a chiton is facing a nude youth with a cymbal in his hand. He is engaged in conversation with a woman, before whom stands a tree. The execution is fine and the designs original, the Adonis scene appearing only on a mirror (Gerhard, *Etr. Sp.* V, pl. 25). The style is that of the Greek and Italic vases of the fourth century before our era. There are no traces of applied color, but there are some Italic features, such as the division into two fields by means of volutes. A second tomb, found near the first one, contained 11 entire or fragmentary archaic Etruscan vases, and 107 Faliscan, one of the latter bearing the inscription *mi Alsi Tismi*, a new name. Thus the tombs, which indicate the presence of a necropolis in the vicinity, show indications of burials at two separate periods, the seventh-sixth centuries and the fourth century B.C. The finds belonging to each of these periods include Greek importations and an extraordinary number of small vases of a ritual character.

FERENTUM.—Ornamental Terra-cottas.—In *Not. Scav.* XVII, 1920, pp. 117–120, G. BENDINELLI records the discovery of two ornamental terra-

cotta tiles from the territory of Ferentum. The first represents a Doric entablature with a cyma and a projecting cornice, both of which retain traces of color. The frieze is divided regularly into triglyphs and metopes; the former are in low relief, while on the latter in high relief are masks of satyrs with bald heads, except for tufts of hair near the ears. The temples are encircled by garlands, which were painted white. The masks themselves, open mouths of which served as spouts for rain water, were red. The triglyphs and the background of the metopes were also in white. The dimensions are .66 m. by .505 by .25. The second tile is also an entablature with a plain frieze, in which there is a hole for the discharge of rain water, made at a later time. Its dimensions are .64 m. by .51 by .22. The back of the tiles is of an unusual form.

GREVE.—An Inscription.—In *Not. Scav.* XVII, 1920, p. 110, T. CAMPANILE publishes with some slight corrections an inscription found near Greve in the province of Florence and already reported in *C.I.L.* XI, 1613.

LEONTINI.—A Unique Coin.—A supposedly unique gold coin of Leontini, weighing seven-tenths of a gram, is described and pictured by its possessor, SILVIO SBOTO, in *R. Ital. Num.* XXXIV, pp. 65–66. Obv., a naked woman riding a horse at foot-pace to right, holding reins in both hands; Rev., LEONTINON (last five letters r. to l.) in quasi-circular legend; open-mouthed head of lion to r., around which four grains of barley or wheat. The probable date is 412–404 B.C.

MONFALCONE.—Roman Tombs.—In *Not. Scav.* XVII, 1920, pp. 99–100, P. STICOTTI reports the discovery, in 1914, of a dozen Roman tombs. Some small objects were found and two fragmentary inscriptions relating to the *fons Beleni*, which is, perhaps, to be identified with the warm spring at Monfalcone, now known as “i Bagni.”

OSTIA.—Excavations.—In *Not. Scav.* XVII, 1920, pp. 41–66, G. MORETTI reports discoveries in the group of ruins between the *horrea* and the *decumanus*. At one time these ruins belonged to a series of rectangular and nearly symmetrical shops in two rows, one of which fronted on the *decumanus*, where the door-sills are preserved, while the other was behind them. In the course of time some slight changes were made, as appears from the character of the walls; finally, at a late period, the central part of the inner row was completely altered by the construction of a large apse in the southern wall and before it a hall in the form of a nave in three divisions. The pavement has a handsome geometric design in colored marbles. In the course of the exploration of this structure twelve inscriptions were found. Other finds were an *oscillum* in giallo antico, somewhat damaged, having on one side a Triton and a Nereid and on the other a male *genius*, facing some object which cannot be made out; a small marble statuette of poor workmanship; a life-size portrait bust of a Roman in a style resembling that of the seated old man by Zeno, son of Attinas (Helbig, *Führer*, II, No. 1315); and sundry fragments, including part of a Christian relief. The most interesting piece of statuary was a colossal monolithic group in Parian marble, representing Commodus and Crispina as Mars and Venus. This group, which was intended for a niche, as appears from the finish of the back, was originally composed after the type of the Borghese Mars in the Louvre and the Venus of Melos. The workmanship of the bodies is good, but the female head was taken from another statue, while the male head has been worked over (it was formerly bearded). The original group was either an ideal one, repre-

senting Mars and Venus, or more probably one of Marcus Aurelius and Faustina. The nature of the finds is somewhat surprising, since the building with the apse was probably a Christian church. *Ibid.* XVII, 1920, pp. 156-166, R. PARIBENI describes the excavation of a block of buildings west of the temple of Vulcan, and of the quarter north of the *porta Romana*. In the first was found a temple, probably an Augusteum, resting on the ruins of two earlier temples; also three houses, interesting in their plan and architectural details, but unfortunately in a poor state of preservation. The excavations near the *porta Romana* threw additional light on the question of the walls and gates. The wall to the north of the gate is in perfect alignment with that to the south and of the same construction. The walls towards the sea are much stronger than those towards the land. The gate was flanked by two quadrangular towers. An interesting inscription records the dedication, in 199 A.D. of an altar to the nymphs by a certain Amnoin, who was *liberatus numine earum gravi infirmitate*. A relief on the altar, representing a dog running to the right and behind it a bearded man who has been thrown down and is raising his arms in supplication indicates that the *gravis infirmitas* was hydrophobia, on which some interesting notes are given. Other inscriptions and fragments are published, including one from the piazzale delle Corporazioni, restored as (*naviculariorum Ale*)xandrin(orum).

POGGIO-CALVELLO.—Miscellaneous Discoveries.—In *Not. Scav.* XVII, 1920, pp. 112-117, G. BENDINELLI relates the discovery of a chambered tomb at Poggio-Calvello near Tuscania, which had been rifled of its contents; also of the remains of a building of the imperial period, forming part of a bath, near the church of S. Maria Maggiore at Tuscania. These are the only remains of that period at Tuscania. One inscription was found.

PORTO BELTRAME.—Three Epitaphs.—In *C. R. Acad. Insc.* 1920, pp. 299-300, R. CAGNAT reports the discovery on the estate of Signor Cardini near Porto Beltrame of three funerary inscriptions. One is remarkable because it commemorates the curious fact that the death of its subject fell on his birthday and at the same hour of the day with his birth.

ROME.—A Bronze Portrait Head.—In *Ausonia*, IX, 1919, pp. 123-138 (pl.; 5 figs.) a commission appointed by a Royal Tribunal at Rome, and consisting of R. LANCIANI, F. HERMANIN, and R. PARIBENI, reports on the authenticity of a bronze portrait head of an elderly woman, found at Chiavenna in 1879. Considering that the work shows many details which, though unusual, have analogies in ancient art; that a modern forger who had acquired enough archaeological knowledge to make the head would probably have produced work of better quality; and that the price at which the head was originally sold was quite low, the commission unanimously declares the head an ancient work. It should be assigned to a date in the second century A.D., probably to the Antonine period.

Columbaria.—In the angle formed by the Via Casilina (ancient Labicana) and the vicolo dei Carbonari, about three kilometres to the left of the former road as one goes from Rome, an important series of columbaria has been found, some of which have been published in *Not. Scav.* for 1912, 1914, 1915, 1917, and 1918. In this great necropolis of the first and second centuries of the Empire four more columbaria have recently been unearthed, near those previously discovered and connected with them. The walls show traces of

polychrome decoration, in which blue predominates, and under the niches are painted shield-shaped places for the names of the owners or occupants. Only two of these contained names, both of which were graffiti, *Successo* and *C. Ann(ius) vixit annis xiii.* The other names had been inscribed on marble slabs attached to the wall, and these had either been carried off or were found in the debris which filled the columbaria. Of the latter forty are published, along with nine fragments forming part of a list of proprietors of *ollae*. The names are those of slaves or freedmen belonging to the end of the first or the beginning of the second century of the Empire, including Apollonius, slave of Maecenas and afterwards of a Nero, probably the eldest son of Germanicus and Agrippina. (G. MANCINI, *Not. Scav.* XVII, 1920, pp. 31-41.)

A Hypogaeum.—In *Not. Scav.* XVII, 1920, pp. 123-141, G. BENDINELLI records the discovery of a *hypogaeum* with paintings near the Viale Manzoni, between the Via di Porta Maggiore and the Via di S. Croce in Gerusalemme. It has a mosaic pavement which is badly damaged, although the central part, with an inscription to an Aurelius, is preserved. The paintings are of different periods, extending from the second half of the second century of the Empire to the first half of the third. They include what is possibly the earliest known representation of the twelve apostles, several pictures of the good shepherd, a seated reader and a flock of sheep, perhaps representing faithful hearers, and Odysseus as a beggar.

A Jewish Catacomb.—In *Not. Scav.* XVII, 1920, pp. 143-155, R. PARIBENI records the excavation of a Jewish catacomb on the Via Nomentana in the villa Torlonia. It was adorned with paintings and yielded two Latin and forty-eight Greek inscriptions of the second and third centuries. The villa Torlonia contains a large marble sarcophagus, on which is sculptured the seven-branched candlestick, but it is not known whether it was found in the villa or brought from Porto.

Miscellaneous Discoveries.—In *Not. Scav.* XVII, 1920, pp. 218-233, G. MANCINI reports various discoveries. At Capo di Bove on the Via Appia antica an inscription. At Tormorancia on the Via Ardeatina a sarcophagus of Greek marble in a perfect state of preservation except for the loss of the cover. It is sculptured in the style of the end of the second century with a representation of the myth of Endymion and Selene. Several inscriptions, some of which were found in the same locality as the sarcophagus, others on the Via Labicana near Torpignattara, on the Via Nomentana, and in the former villa Patrizi (one of these mentions the *vicus Lori*, = *Lorium*), and on the Via Ostiensis. On the property of the società Colla e Concini di Milano, two kilometres from the Via Praenestina, there was found the headless statue of a fisherman (1.44 m. by .47 m.), a copy of a Hellenistic original of the third century, apparently made in the second century of our era; also a marble statue of a satyr, belonging to the best imperial period, which had served as a fountain ornament; and a sepulchral gallery containing Christian inscriptions.

The Thermae Suranae.—In *Not. Scav.* XVII, 1920, pp. 141-142, R. PARIBENI reports the discovery, during a restoration of the church of S. Sabina, of the inscription of the *Thermae Suranae*, which was found on the door-post of the convent near the church. The inscription is on a marble slab measuring 2.45 m. by .48, which is about half of the original length. The name of the emperor is restored as Gordianus III. The baths, perhaps, occupied the site

of the *domus Surae* (Mart. VI, 64), which seems to have been approximately that of the present "trattoria del Castello dei Cesari."

SARDINIA.—Bronzes from Terranova Pausania.—In *Not. Scav.* XVII, 1920, pp. 91–96, A. TARAMELLI publishes a collection of bronze utensils, discovered some years ago at Terranova Pausania and at present in the museum at Cagliari. While none of them is inscribed, it is evident from their design that they belong to a good Roman period. They are believed to be of local manufacture, intended for the kitchen or table use of some well-to-do citizen of Olbi or of the *ager Olbiensis*. They include a candelabrum, several small vases, a heater for hot water, apparently two frying-pans, and a large number of detached handles, some of which are curiously ornamented.

SELINUNTO.—The Temenos of Demeter.—In *Not. Scav.* XVII, 1920, pp. 67–91, E. GLABRICI gives an account of explorations in the temenos of Demeter Malophoros at Gaggera, of which no official record has been published since 1898. Three brief campaigns, in 1902, 1903 and 1905, resulted in clearing the north angle of the temenos and uncovering a smaller temenos to the north of the larger one. In 1915 the excavations were resumed with the purpose of clearing the western end of the larger temenos and the space between the two sanctuaries. They resulted in the discovery of a large number of votive objects, belonging to a period extending from the latter part of the seventh century to the end of the fifth before our era, the earliest being found within the western angle of the larger temenos. The votive objects include an interesting series of figurines and masks. The female figures, which are by far the more numerous, represent the goddess with various attributes, the dove, pomegranate or garland, and in later times a torch or little pig. Sometimes she carries in her arms the infant Kora, or perhaps Eros. These figurines fall chronologically into four groups, in the first of which the earliest specimens are of Ionic-Asiatic manufacture, sometimes showing Egyptian influence, while the second shows the traditional female type of the sixth century, represented by the maidens of the Acropolis. A complete classification and publication of the discoveries is in preparation by the Superintendency of Palermo.

SICILY.—Coin-Portraits of Sicilian Tyrants.—The total loss by accidental or studied destruction of statues of the rulers of Sicilian cities in the period of the tyrannies lends especial importance to the study of their portraits on coins. The entire series of such likenesses is passed in review by SALVATORE MIRONE in *R. Ital. Num.* XXXIV, pp. 5–30 (figs.).

SUTRI.—A Bronze Bowl.—In *Not. Scav.* XVII, 1920, pp. 121–122, G. BENDINELLI describes a barbaric bronze bowl found at Sutri, in the district known as "Condotti."

TRIESTE.—The Arco di Riccardo, and Discoveries.—In *Not. Scav.* XVII, 1920, pp. 102–107, P. STICOTTI describes the isolating of the Roman arch called di Riccardo, the discovery of a bilateral relief of poor workmanship, and the finding of a cinerary urn.

UMBRIA.—Miscellaneous Discoveries.—In the district called Montepiglio, near the Pelasgic walls of Aemilia, G. MANCINI (*Not. Scav.* XVII, 1920, pp. 15–20) records the discovery of fragments of Roman pottery of various kinds, which, taken in connection with an excellent quality of clay, suggest the presence there in antiquity of a manufactory of pottery. Excavations revealed three parallel walls made of large rectangular blocks of tufa, running

northeast and southwest and bounded on the north by another wall. Several brickstamps were found, all of which were previously known. At Montepelato, near the road leading from Aemilia to Giove, a well was found covered with a circular slab of stone with a hole in the middle. This hole was stopped up by a marble bust, the head belonging to which was found near by, a portrait of the time of the Antonines. Near the well there were also found the plinth and five fragments of a statue of the youthful Bacchus leaning against a tree-trunk; also two large stelae of trapezoidal form, 1.15 m. by .70 by .19, each of which had on one side a large and deep indentation of the same trapezoidal form. Similar stones, which have been found here and there near Aemilia, always occur in pairs, at a distance from each other varying from a metre to 2.20 m. Their purpose is uncertain, but they may have had some funerary use. Near the church of S. Agostino, which has been made the depository of the local antiquities, there is an architectural fragment, found in the Via Cavour at Aemilia, with the inscription *Sex. Avie(nus)*, which also occurs in *C.I.L.* XI, 4383 from the same locality.

VENEZIA GIULIA.—Excavations.—In *Not. Scav.* XVII, 1920, pp. 1-14, G. CALZA describes work in newly acquired Italian territory, undertaken with the purpose of continuing the unfinished excavations of the Austrians, arranging the collections in the museums, and isolating and protecting the Roman monuments at important centres. At Pola the buildings obstructing the temple of Rome and Augustus have been cleared away. Excavations were made to determine the ancient level of the street, to define the line of the buildings which closed the forum in the direction of the sea, and to ascertain the exact proportions of the cella. The arch of Sergius, commonly known as the Porta Aurata or Porta Rata, which formed the inner decoration of the gate leading to the Quarnero (sinus Flanaticus) was cleared of earth down to its foundations. Nothing of value or of topographical importance was found except an inscription mentioning the *Velina tribus*, which also occurs in three previously found inscriptions of Pola. At Aquileia the mosaic pavement of a second basilica was unearthed, lying to the north of, and parallel with, that of the Bishop Theodorus. The dimensions of the pavement (37.40 m. by 17.04 by 17.20) are nearly identical with those of the other basilica, but it was in part destroyed by the foundations of the Campanile Poponiano. The purpose for which the newly found basilica was used has not yet been determined. The pavement is a fine one and contains three fragmentary inscriptions. At Grado a hall was found containing a fine Byzantine mosaic. It consists of circles and squares containing various designs, a cross, the swastica, two birds, etc. A fragmentary inscription records the payment of vows. Above this is a second mosaic, consisting of a large circle in which are inscribed nine smaller ones. Inscriptions in five of these small circles mention the payment of vows by three *notarii*, a *lector*, and a *diaconus*. In another we are told that the hall was built by Elia, patriarch from 571 to 586.

FRANCE

BRILLE-BOEUF (CÔTE-D'OR).—A Gallo-Roman Iron Furnace.—In *R. Arch.*, fifth series, XIII, 1921, pp. 127-131 (fig.), HENRY COROT describes the remains of a Gallo-Roman furnace (*haut-fourneau*) found at a place called

Brille-Boeuf, between Verdonnay, Planay, and Lavoisy, in the Côte-d'Or. In the same region are many other traces of Gallo-Roman iron-working.

ISTURITZ.—Engraved Signs.—In *R. Arch.*, fifth series, XIII, 1921, pp. 33–35 (3 figs.) E. PASSEMARD publishes three fragmentary horn objects from the cave of Isturitz. On one of them is, apparently, a relief representing a twig with buds. The incised lines on the other objects may be stylizations or degenerations of similar representations. They are probably not in any sense alphabetic, but had some magic meaning.

PARIS.—An Aryballus in the Louvre.—In *R. Arch.*, fifth series, XIII, 1921, pp. 7–17 (fig.), K. FRIIS JOHANSEN publishes and discusses an aryballus (height 0.062 m.) acquired by the Louvre. It is of the class called Proto-Corinthian, which the writer, following Loeschke, prefers to call Sicynian. The decoration consists of rays at the bottom, then a narrow band containing a swan and two dogs pursuing a hare, then a wide band containing battle scenes, a lotus-palmette pattern on the shoulder, around the mouth a circle of pistils with round heads and around this a circle of curved crockets. The flat handle is decorated with a pattern of squares and triangles. Shining varnish and three dull colors (dark red, light brown, yellow) are used. Seven related aryballi are cited, the most familiar of which is the "Macmillan" vase (*J.H.S.* 1890, p. 167, pls. I, II). These vases are usually assigned to the sixth century B.C., but two of them (Taranto, *Jb. Arch. I.* 1906, p. 118, 5; Syracuse, *Mon. Antichi*, XVII, p. 157, fig. 116) were found in association with subgeometric ware. They must, therefore, be assigned to the middle of the seventh century B.C. In a note added to this article (pp. 17–20) E. POTTIER points out that the conclusion just stated is not inevitable, and maintains that the later date for these vases is more probable than the earlier.

A Lecythus from Kertch.—A fine lecythus with figures in relief, discovered at Kertch in the Crimea, has been acquired by the Louvre. In shape and in technique it is a pendant to the lecythus signed by Xenophantus, also in the Louvre (Rayet and Collignon, *Céramique grecque*, pp. 264–265), and E. POTTIER, who publishes the new accession in *R. Ét. Gr.* XXXII, 1919, pp. 406–414 (pl.; 2 figs.) attributes this vase to the same potter. The figures, from left to right, are Athena (seated), Dionysus (standing), Demeter (seated), Persephone (standing), Triptolemus, who is represented in the upper part of the field of composition, seated in his winged chariot, and a seated youth of somewhat effeminate form. Since this figure cannot be Heracles, who is sometimes associated with the Eleusinian deities; and since he seems to be too much at ease among the gods to be Eubouleus, the swineherd of Eleusis, he is probably to be identified as Apollo. This composition, as well as the Eleusinian representations on the hydria from Cumae (Daremberg and Saglio, *Dictionnaire des antiquités*, s.v. *Eleusinia*, fig. 2639) and on the pelice from Kertch (*ibid.* fig. 2630), is probably derived from paintings or sculptures at Eleusis.

An Obol of Astacus in Acarnania.—In *R. Ét. Gr.* XXXII, 1919, pp. 10–15 (fig.) E. BABELON describes an obol of Astacus in Acarnania, belonging to the collection of the late Dr. Pozzi, a distinguished surgeon. The coin shows a head of Asclepius on the obverse and a cupping-glass and scalpel on the reverse, and is to be dated in the fourth century. There are some other indications of a cult of Asclepius in Acarnania. M. Babelon also notes other representations of cupping-glasses on ancient monuments.

Two Ophite Intaglios.—In *C. R. Acad. Insc.* 1920, pp. 147–156 (2 figs.) ADRIEN BLANCHET publishes two intaglios with symbols of the Gnostic sect of serpent-worshippers known as the Ophitae. On one side of each is represented a daemon with a human body, an ass's head, and legs which take the form of serpents. He holds a tablet on which is inscribed $\text{IA}\Omega$, the name of a daemon frequently represented on Gnostic gems. The Gnostic books name the Egyptian god Seth as one of the Rulers of Heaven, and describe him as having the head of an ass. The recognition of this daemon of the Ophitae throws light on the interpretation of the celebrated graffito of the Palatine, representing the crucifixion of a man with an ass's head. It is quite possible that this drawing, which has been generally supposed to be a caricature by an enemy of Christianity, is really the serious production of a cult in which Gnostic beliefs were superposed on Judaeo-Christian traditions.

The Pozzi Collection.—In *R. Arch.*, fifth series, X, 1919, pp. 230–234 (15 figs.) S. R. (EINACH) gives (with brief notes) line drawings of some of the chief sculptures of the collection of the late Dr. Pozzi, which was sold, June 25–27, 1919.

A Statuette from Clazomenae.—A fragment of an archaic statuette of a seated female figure, found at Clazomenae, has recently been given to the Museum of the Louvre, and is discussed by ÉTIENNE MICHON in *R. Ét. Gr.* XXXII, pp. 393–397 (2 figs.). It comprises the head and bust of the figure, lacking the left arm. The position of the figure is rigid. The texture of the chiton is indicated by incised lines running obliquely from the arms to the breasts, and below the breasts by vertical lines. The features are much defaced. The hair falls in heavy masses on either side, and is bound by a fillet above the forehead. The fragment seems somewhat earlier in style than the Aphrodite of Clazomenae in the Louvre (*B.C.H.* XXXII, 1908, p. 265), which Collignon dates about the middle of the sixth century. The material is limestone.

A Vase-fragment in the Style of Hieron.—In *R. Ét. Gr.* XXXII, 1919, pp. 403–405 (fig.) M. MORIN-JEAN describes a red-figured fragment in his father's collection of Greek vases. It shows the head of a bearded man, tilted backward in the grasp of a youth behind him, while at the left appears a hand holding an oenochoe, apparently with the intention of pouring from it into the man's mouth. Gestures, poses, drawing of chin, mouth, hair, eyes, fingers, associate this fragment with the Lysis-Hieron group. It is probably to be attributed to Hieron or at least to his school.

SAINT-JEAN-DE-GARGUIER.—Antiquities.—In *R. Ét. Anc.* XXIII, 1921, pp. 120–123, E. DUPRAT reports the discovery of miscellaneous antiquities at the château of Saint-Jean-de-Garguier: (1) a fragment of a funerary inscription of Roman date, in local limestone; (2) a Gallo-Roman relief, representing a lion, also of local stone; (3) coins ranging in date from 138 to 337 A.D. C. JULLIAN adds a conjecture regarding the name Garguier, which he thinks may have a connection, either derivative or cognate, with Gargara in Asia Minor. Garguier was in ancient times the most important centre of native population in the region of Marseilles.

SAVIGNY.—An Inscription.—In *R. Ét. Anc.* XXIII, 1921, p. 110, C. JULLIAN republishes an inscription from Savigny (*C.I.L.* XIII, 1663). A recent copy vindicates the authenticity of this epitaph, which was suspected rby the editors of the *Corpus*.

GERMANY

BERLIN.—A Greek Bronze.—In *Ber. Kunsts.* XLII, 1920–1921, pp. 6–12 (6 figs.) K. A. NEUGEBAUER reports that the Antiquarium in Berlin has acquired by gift a Greek bronze statuette of fine quality from the Lessing collection in Berlin. The modern head has been removed. The figure, which in its present condition is 0.213 m. in height, is that of a god, probably Zeus or Poseidon. The motive—a god standing with the left arm raised and supported by a spear or sceptre, is derived from the Argive art of the first half of the fifth century B.C.; but the posture shows the influence of Polyclitus, while the proportions, somewhat more slender than those of Polyclitus, suggest that the date of the work is the early part of the fourth century.

A Graeco-Egyptian Relief.—In *Ber. Kunsts.* XLII, 1920–1921, pp. 15–22 (3 figs.) H. SCHÄFER publishes a Graeco-Egyptian relief recently added to the Berlin collection. It is of limestone, and shows a man and his wife walking to the right, accompanied by a cow and a steer, represented on a smaller scale. The man carries a calf, the woman various articles of food suspended on a pole which she supports as a yoke. The woman's dress has the form usually associated with Isis. In spite of a general adherence to traditional forms, there are many details of modelling in which the relief betrays Greek influence. The male figure is an almost exact replica of one in a relief in the Pelizaeus Museum at Hildesheim.

The Jacoby Collection of Oriental Art.—In *Ber. Kunsts.* XLII, 1920–1921, pp. 29–42 (11 figs.) OTTO KÜMMEL describes the magnificent collection of some two thousand objects of oriental art recently given by Gustav Jacoby to the Abteilung für ostasiatische Kunst of the Berlin museums. It includes Chinese and Japanese paintings, Japanese lacquers, sword-guards and other metal objects, and pottery.

New Fragments of Greek Music.—In *R. Arch.*, fifth series, X, 1919, pp. 11–27, THÉODORE REINACH publishes, with notes and translation, the text of the verses, and transfers to modern musical notation the ancient musical signs, written on the *verso* of a papyrus in Berlin (*Berliner Griechische Urkunden*, II, 696; pap. 6870). In the previous publication by Schubert (*Sitzb. Berl. Akad.* 1918, pp. 763 ff.) no attempt was made to interpret the musical signs. The music is very simple. Several points are uncertain. The papyrus dates from the second century A.D.

MUNICH.—The Terra-cottas of the Loeb Collection.—The interesting terra-cottas of the collection of James Loeb have been published in two sumptuous volumes. The introduction is by Mr. Loeb, the catalogue itself by Johannes Sieveking. The collection contains Greek terra-cottas of all classes from the primitive idols of the fifth century to late Alexandrian caricatures, as well as Italian masks, faces, and reliefs of various dates extending well into the period of the Roman Empire. A particularly fine piece is a portrait head of Cicero. The terra-cottas were found in regions as far apart as southern Russia, Egypt, and Italy. Many of them are from Greece and Asia Minor. [*Die Terrakotten der Sammlung Loeb, herausgegeben von Johannes Sieveking mit einer Einleitung von James Loeb.* 2 vols. xvi, 42 pp. (64 pls.; 8 figs.); ii, 70 pp. (64 pls.; 19 figs.). Munich, 1916, A. Buchholz.]

AUSTRIA AND HUNGARY

EXCAVATIONS OF THE AUSTRIAN ARCHAEOLOGICAL INSTITUTE IN 1912 AND 1913.—In *Jh. Oest. Arch. I.* XVI, 1913, Beiblatt, cols. 93-144 (10 figs.) E. REISCH reports upon the excavations carried on by the Austrian Archaeological Institute in 1912 and 1913 in various parts of the Austrian Empire. Work was done at Teurnia, Aguntum, Virunum, Iuvenna, Colatio, Pettau, Flavia Solva, Emona, Aquileia, Pola, Obrovazzo, Nona, and Salona. The excavations at Burnum near Zara and at Aequum near Salona are described in greater detail. *Ibid.* XVII, 1914, Beiblatt, cols. 5-86 (65 figs.) R. EGGER gives a full account of the discoveries at Aguntum, Teurnia and Virunum. They consist of house and town walls, Latin inscriptions, pottery and minor antiquities of various kinds. *Ibid.* cols. 87-154 M. ABRAMIC describes the fragments of rude sculpture, inscriptions, brick stamps, etc. from Pettau, and gives a plan of the excavations. *Ibid.* cols. 161-184 (14 figs.) A. GNIRS tells of the excavations at Pola.

ABAUJ SZEMERE.—A Prehistoric Girdle-Ornament.—In *Sitz. Anth. Ges.* 1913-14, pp. 49-50 (fig.) Baron F. NORCSA reports the discovery of a number of prehistoric bronze objects at Abauj Szemere in Northern Hungary. The most interesting is an elaborate girdle ornament. A piece of rectangular shape has the form of a sort of lattice enclosing and supporting disks, and to one of the long sides is attached an elaborate series of chains and pendants.

AU.—The Excavation of the Roman Cemetery.—In *Jh. Oest. Arch. I.* XVII, 1914, Beiblatt, cols. 203-256 (50 figs.) A. SCHÖBER describes the contents of certain graves in the Roman cemetery at Au in the Leitha mountains. There were both cremation and inhumation burials, and in or near the graves there were found many vases, small bronzes, Latin inscriptions, grave reliefs, etc.

ENNS.—Prehistoric Objects.—In *Mitt. Anth. Ges.* XLVI, 1916, pp. 1-36 (3 pls.; 3 figs.) the prehistoric objects found at Enns in Upper Austria are classified and described by Adolf Mahr. The situation of the town near the confluence of the Enns and the Danube gave the place a commercial importance in the prehistoric period. No certain remains of the Palaeolithic period were found here, but many axes, arrow-heads, and other objects of Neolithic date have been discovered, and numerous bronze implements, weapons, and ornaments, with some pottery of the earlier and later periods of the Bronze Age. Some of the earlier pottery is of a type which comes from the region of Lower Austria and Western Hungary: gray-black or yellow-brown clay, with thin walls, shaped with some elegance. Remains of the Hallstatt and La Tène periods are comparatively scanty.

GARS.—Prehistoric Fortifications.—In *Sitz. Anth. Ges.* 1913-1914, pp. 3-4 (2 figs.) R. MUCH describes briefly the remains of a prehistoric fortification near the Schimmelsprung in the vicinity of Gars. The fortification has the shape of a horseshoe. He gives a sketch of another early fortification on the Taberberg between Thunau and Rosenberg, and points out that the word Taber, which has come into the Magyar and other Eastern European languages from the Turkish, and means fortification or fortified camp, often occurs in the names of places where such prehistoric mounds have been found.

HASCHENDORF.—A Prehistoric Bronze.—In *Mitt. Anth. Ges.* XLIV, 1914, pp. 316-326 (2 pls.; 3 figs.) J. R. BÜNKER reports the discovery of a

remarkable bronze object at Haschendorf near Neckemarkt, apparently on the site of a prehistoric cemetery. A plate of bronze bent into a cylindrical form, like a crown, is pierced with large circular holes, and ornamented with bosses and lines of incised dots. It rests on a series of wheel-shaped supports, and is crowned by a circular bronze plate ornamented with concentric circles of zig-zag lines. Montelius dates a similar object from Sweden in the First Bronze Age. It is uncertain whether the bronze was a table of offerings, or whether, in a reversed position, it served as a hanging receptacle.

PETTAU.—The Roman Bridge.—In *Jh. Oest. Arch. I. XVII*, 1914, Beiblatt, cols. 155–160 (2 figs.) V. SKRABER describes the remains of the Roman bridge at Pettau, including part of an inscription which seems to date the structure in the time of Hadrian.

SALZBURG.—Bronze Age Remains.—In *Sitz. Anth. Ges.* 1913–1914, pp. 55–57 (2 figs.) M. HELL reports the discovery of remains of the Bronze Age on what seems to have been a sacrificial site on the Gosserberg near Salzburg. Ashes, bones, and sherds were found. The earliest pottery suggests the Neolithic style, but probably belongs to the earliest Bronze Age. Later examples are ornamented with rows of finger-nail marks and with incised lines and bosses. A few late sherds belong to the Hallstatt period.

VIENNA.—Two Bronze Statues from Benin.—In *Mitt. Anth. Ges. XLVI*, 1916, pp. 132–136 (pl.; 2 figs.) FRANZ HEGER describes two curiously realistic bronze statues of dwarfs from Benin, and a relief representing a negro, whose figure is covered with a net-like ornament, perhaps representing painted ornament of the person. The discussion of these objects is followed by a detailed catalogue of the objects from Benin in the Naturhistorisches Museum in Vienna. Forty-three are metal plates with reliefs which for the most part represent negroes, but in some cases Europeans and animal figures. There are also figures and heads in the round, and miscellaneous metal objects, as well as ivory figures and ornaments.

A Military Diploma of the Year 71 A.D.—In *Jh. Oest. Arch. I. XVII*, 1914, pp. 148–193 (2 pls.) W. KUBITSCHKE publishes a perfectly preserved military diploma dating from the year 71 A.D. It was found between Kavala and Dedeagatch, Thrace, and is now in the Kunsthistorisches Museum, Vienna.

GREAT BRITAIN

CHESTER.—The Roman Cemetery.—In *Ann. Arch. Anth. VIII*, 1921, pp. 49–60 (3 pls.) R. NEWSTEAD publishes the second and concluding part of his report on the excavation of the Roman cemetery on the Infirmary Field at Chester. (For Part I, see *Ibid. VI*, 1914, pp. 121–167.) Coins of Antoninus Pius and Commodus discovered in the graves prove them to be Roman and of the second half of the second century or the early part of the third. Most of the graves are shallow trenches, the floors spread with pounded brick or tiles, the burials protected by roof-tiles, many of which have the stamp of the Twentieth Legion. Sepulchral vessels and other objects buried in the graves seem to have been intentionally broken. The region designated as Site X yielded a variety of objects of bronze, iron, lead, glass, and especially pottery, includ-

ing twenty-five pieces of terra sigillata. A paved area and two paved footways, apparently constructed as paths across the cemetery, were discovered.

HOLKHAM.—*A New Portrait of Plato.*—A marble head at Holkham House was recognized by F. POULSEN in 1919 as the long-desired individualized portrait of Plato. It is a Roman copy of the second century A.D. from a Greek original of the middle of the fourth century B.C., and it represents an old man of great dignity and intellectual power and of fiery temper. It has certain characterizing features of the numerous class of heads of Plato that is, perhaps, best represented by the Vatican bust marked Zeno, but lacks the generalized element in that type which relates it closely to the still not clearly individualized old men of the early fourth century Attic grave reliefs. The original of this common type may have been a statue set up on the grave of the philosopher, copies of which would readily be bought by the uncritical Roman traveller to furnish his library at home. The Holkham head is a vastly superior work and may with some plausibility be ascribed to the gifted Silanion. (*J. H.S.* XL, 1920, pp. 190–196; 2 pls.; 2 figs.)

OXFORD.—*Acquisitions of the Ashmolean Museum in 1919.*—In *R. Arch.*, fifth series, XI, 1920, p. 376, S. R. gives a list of important acquisitions of the Ashmolean Museum in 1919: 1, Marble figurine of Sumerian style, from Istabek; 2, Ivory Hittite statuette bought at Aleppo; 3, Steatite weight in the shape of a couchant calf; weight, four shekels; on the base a relief of Hittite style; 4, gold ring of Aegean origin; on the bezel an archer-god suspended in the air above two women, one of whom seems to be fleeing, the other stricken down; 5, Fine Hellenistic head from Rome, from the collection of Viscount Downe; the hair resembles that of the Athena (?) head at Bologna; 6, Six Rhodian *askoi* in form of animals, with paintings; 7, Recumbent goats, bronze with head inserted, weighing 20 Corinthian staters; 8, Hair-binder; silver, Arabian style of the tenth century; 9, Collection of 186 historical English medals (1545–1897); 10, 162 Celtic coins (of which 44 are British gold coins) from the collection of Sir John Evans.

STONEHENGE.—*Recent Investigations.*—In *The Antiquaries Journal*, I, 1921, pp. 19–39 (3 pls.; 13 figs.), Lt. Col. W. HAWLEY and C. R. PEERS present an interim report on recent operations and discoveries at Stonehenge, which has become the property of the Nation by the gift of Sir Cecil Chubb of Bemerton. The methods by which the insecure stones have been straightened are described. Investigation of the soil accompanied the work of restoration, and revealed quantities of sarsen fragments, flint implements and chips, bone fragments, fragments of Romano-British pottery and other small objects. The finds at the base of the vertical stones permitted interesting inferences regarding the way in which they were originally set in place. The stone was slid down an inclined plane to the hole in which it was to stand, then drawn into an upright position against a wooden prop, and steadied by posts driven into the soil in front. Later the protruding posts were burned, so that the soil at the base of the stone should not be disturbed. The series of depressions within the circular earthwork, known as Aubrey's Holes, was investigated. They vary in depth from two to three feet, and in diameter from two to five feet. It is probable that the foreign stones found at Stonehenge once stood in them, forming a circle within the earthwork. Later cremated human remains were buried in them. A cutting through the rampart and ditch showed that the

vallum was a low one of chalk and rubble, and that the ditch, about 39 inches deep, contained prehistoric, Romano-British, and later relics.

TRAPRAIN LAW.—A Hoard of Silver.—In *The Antiquaries Journal*, I, 1921, pp. 42–47 (5 figs.), A. O. CURLE reports the discovery of a remarkable hoard of Roman silver, apparently of about the fourth century of our era, at Traprain Law in the County of Haddington, East Lothian, Scotland. The ornament of many objects had Christian motives; others were pagan. None showed any Celtic influence; on the other hand some were of distinctly Teutonic style. It is inferred that the silver is the booty of some raid made by Saxon pirates on the coast of Gaul, at the time when the Visigoths were in occupation of Western Gaul. The silver had apparently been hastily abandoned in the stress of some danger.

NORTHERN AFRICA

AUNOBARI.—Two Inscriptions.—In *C. R. Acad. Insc.* 1920, pp. 140–146, L. POINSSOT publishes two inscriptions which were discovered near the ruins of Aunobari, in the vicinity of Douga. One records a judicial decision in a dispute of boundaries between the Aunobaritani and one Julius Regillus. The decision given by the legate of the proconsul was after appeal confirmed by the proconsul himself. The other inscription is a list of ten names of *scribae* and other officials, probably attached to a similar decree on a boundary question. In this list the inclusion of the *haruspex* of the governor is of interest, since there is no other epigraphic evidence of such an officer. The general style of lettering shows that these inscriptions are later than Hadrian and earlier than the Syrian emperors.

BULLA REGIA.—The Donors of the Thermae.—In *C. R. Acad. Insc.* 1920, pp. 325–329, L. CAGNAT publishes a fragmentary inscription from Bulla Regia, showing that the Baths in this city “were constructed in the last years of the second century of our era at the expense of a family of the city, and particularly of a certain Memmia Fidiana, daughter of Memmius Fidius, a former consul.”

Excavations.—In *C. R. Acad. Insc.* 1920, pp. 323–325, L. CARTON reports that the excavations of the Thermae at Bulla Regia have been continued. A structure with a curved façade in the hypocaust hall has been disengaged, and proves to be of two stories. The upper is in the form of a niche. The keystone of the arch is ornamented with a female bust in relief. The lower part has an arch which is cut by the suspended mosaic floor of the hall, so that at the base it opens into the hypocaust and above into the hall. The polygonal subterranean structure east of the baths was further explored. It was probably connected with the baths. The room above it had a fine mosaic floor and a vaulted ceiling with stucco decorations in relief. On the site of the Christian cemetery 200 metres north of the Nymphaeum were found architectural fragments which indicate that a church stood on this site.

CARTHAGE.—An Ancient Fountain.—In *C. R. Acad. Insc.* 1920, pp. 258–268 (2 figs.) L. CARTON describes an elaborate series of structures connected with a fountain which he discovered north of the “wall of forty metres” which forms the north angle of the maritime fortification of Carthage. The fountain was

at the foot of a ravine, not far from the shore. A chamber partly cut in the rock, at the source of the fountain, adjoins a long gallery or passage through which the water is conducted to a vaulted hall, 20 m. long, in the centre of which is a channel 1.80 m. deep, formerly covered with slabs. The vaulted hall opens through a door of finely cut stones into a vaulted reservoir, about 6 m. square. A passage led around one side of the reservoir from the vaulted hall to the front of the building. The façade had four pilasters and two openings, one of which led into the passage, while the other was a false door. It appears that the "salle de captation" at the source and the adjoining passage belong to the Punic period. The vaulted hall and stairs descending to it were constructed in Roman times. Later the stairs were abandoned and a vaulted reservoir constructed in front of the hall. The elaborate façade is of still later date. Between this façade and the "wall of forty metres" extends an imposing buttressed wall; and in front of this was found a great mass of debris, including architectural and sculptured fragments, pottery, stucco revetments, and inscriptions, indicating that some imposing building, perhaps a temple, stood above the wall. The discovery of a quantity of murex shells suggests that there were dyeing works here, in convenient proximity to the fountain. It is probable that the two thousand amphorae discovered in this region by Père Delattre also had a connection with the fountain. They seem more numerous than was necessary for supplying ships with water. Possibly the place where these jars were discovered was a wine-cellar. But a graffito on one jar, *Servate vita* (sic) *qui ab omnibus* (sic) *zelatur*, is tentatively interpreted by M. Carton as a reference to a supposed medicinal quality in the water of the fountain; in that case the amphorae might be water-jars. R. Cagnat, however, suggests quite different interpretations of this inscription (*Ibid.* pp. 269-272).

The Basilica near Saint Monica.—In *C. R. Acad. Insc.* 1920, pp. 191-199 (fig.) PÈRE DELATTRE reports on his exploration of the great ruined basilica near Saint Monica at Carthage. The atrium is completely occupied by Christian burials, which are grouped about a central crypt which is 5 m. deep, 18 m. long, and 4.25 m. wide. Other crowded graves are found outside the basilica, especially between the building and the ravine. The discovery of sarcophagi which have been covered by the walls of the basilica proves that there was a cemetery on this site before the church itself was built. Père Delattre publishes several of the funerary inscriptions, some of which were executed in mosaic.

DJEMILA.—**New Names of Martyrs.**—In *C. R. Acad. Insc.* 1920, pp. 290-297, PAUL MONCEAUX outlines the ecclesiastical history of Djemila, and reports the discovery of a stone which was, perhaps, set behind the altar of one of its churches, commemorating seven martyrs hitherto unknown. The inscription dates from the fourth century.

A Table of Measures.—The inscription on a table of measures found at Djemila is published by M. ALBERTINI in *C. R. Acad. Insc.* 1920, pp. 315-319. The table was installed by a consular named Herodes. It is quite possible that he was acting in obedience to a decree of Valentinian, 386 B.C., directing the establishment of bronze and stone standards of weights and measures (Cod. Theod. XII, 6, 21).

DOUGGA.—**A Conductor Praediorum.**—In *C. R. Acad. Insc.* 1920, pp. 357-359, L. POINSSOT calls attention to an inscription in honor of Aulus

Gabinus Datus, who is described as *conductor praediorum regionis Thuggensis*. This is apparently the first inscription extant to recognize the office of superintendent of imperial farm lands. Datus and his son built temples at Thugga in the reign of Hadrian (see L. Poinssot, *Nouv. Archives des Missions*, XXII, fasc. 16, *passim*.)

Two Inscriptions.—In *C. R. Acad. Insc.* 1920, pp. 285–288, L. POINSSOT publishes two inscriptions recently discovered a few miles east of Dougga. One is a milestone, important as indicating the site of the *civitas Mizigitanorum*; the second is a dedicatory inscription by a *pagus Assalitanus*, which was a dependency of this *civitas*.

LAMBAESA.—Antica and Postica.—In *C. R. Acad. Insc.* 1920, pp. 179–184, PAUL MONCEAUX describes a bronze plate in the form of a Greek cross, set in a limestone block which was found at Lambaesa, not far from the temple of Aesculapius. It is inscribed with the words *antiqua* and *postiqua*, the former intersecting the other at right angles, in accordance with the shape of the cross. In augury *antica* designated the south and *postica* the north, but in the transference of these terms to surveying, *antica* came to mean the north-south line, and *postica* the east-west line. Plates of this type were sometimes set in monuments as a sort of commemoration of the original survey.

MADAUROS.—Christian Victims of the Moors.—In *C. R. Acad. Insc.* 1920, pp. 329–333, PAUL MONCEAUX publishes an inscription from a mensa or tombstone found at Madauros, commemorating two brothers, Theodorus, a deacon, and Faustinus, who were killed in an incursion of the Moors, late in the fourth or early in the fifth century.

UNITED STATES

ANN ARBOR.—Egyptian School Tablets.—In *Cl. Phil.* XVI, 1921, pp. 189–194, A. E. R. BOAK describes three tablets from Egypt, now at the University of Michigan, two of them Greek and one Coptic, dating from not earlier than the fourth century and containing school exercises in numerals and the writing of alphabets and syllables.

NEW YORK.—Accessions to the Collection of Greek Vases.—In *B. Metr. Mus.* XV, 1920, pp. 253–256 (2 figs.) GISELA M. A. RICHTER describes two Rhodian vases recently acquired by the Metropolitan Museum, and reports the acquisition of a typical Athenian Geometric stand, and a large “Mycenaean” vase of the Late Minoan III style, decorated with conventionalized nautili.

Etruscan Bucchero Vases.—In *B. Metr. Mus.* XVI, 1921, pp. 103–106 (11 figs.) GISELA M. A. RICHTER reports that the Metropolitan Museum has obtained thirty pieces of Etruscan bucchero pottery, illustrating many typical shapes and the usual orientaling motives of ornament. Miss Richter remarks that the characteristic black color “was produced by the simple process of firing red clay under completely ‘reducing’ conditions (that is, with insufficient air in the kiln, when the red ferric oxide of the red clay is turned into black ferrous oxide).” The effect proved suitable for vases made in imitation of metal.

A Silver Cup of the T'ang Period.—In *B. Metr. Mus.* XVI, 1921, pp. 111–112 (fig.) it is reported that the Metropolitan Museum has acquired a beautiful

embossed silver cup of the T'ang period, similar in style to the treasure of the Emperor Shomu, preserved in the Shosoin at Nara. The interior is decorated with conventional patterns, and with representations of birds and flowers and seated figures of sages. The ornament is in part gold-plated.

NORTHAMPTON.—A Roman Cinerary Urn.—In *Bulletin of the Hillyer Art Gallery, Smith College*, April, 1921, pp. 2-3 (fig.) S. N. DEANE reports that the Hillyer Gallery has acquired a Roman cinerary urn with an inscription to Aulus Seius Zosimianus (*C.I.L.* VI, 1, 3536). This urn was for many years in the Villa Strozzi, Florence. Its ornament is characteristic of the second century.

PROVIDENCE.—Accessions to the Ostby Collection of Jewelry.—In *B. R. I. Des.* IX, 1921, pp. 21-22 (fig.) additions to the Ostby Memorial Collection of Jewelry in the Rhode Island School of Design are reported. They include "twelfth century Persian finger-rings, from Rhages, Syrian 'boat earrings,' Syro-Roman ear-rings, and necklaces, Roman necklaces of the second century A. D., and a Chinese ring of the T'ang dynasty."

EARLY CHRISTIAN, BYZANTINE, MEDIAEVAL, AND RENAISSANCE

GENERAL AND MISCELLANEOUS

AL-FOUSTAT.—Excavations.—In *C. R. Acad. Insc.* 1920, pp. 243-247, A. GABRIEL gives a summary account of excavations which have been made on the site of Al-Foustat, the earliest Mussulman capital of Egypt, south of Cairo, by Ali Bey Bahgat, curator of the Museum of Arabic Art. A great quantity of pottery was discovered which will constitute a unique collection of oriental ceramics for the Museum. The site is so ruined that houses are standing only to the height of one or two metres. The house-plan usually shows a grouping of rooms around a central court with a basin. Some of the more sumptuous houses have an elaborate system of terra-cotta pipes to supply the basins. The buildings were generally of two stories. The discovery of the wall built by Salah-ed-Din to unite Al Kahirat and Al Foustat shows that the latter site was already in ruins in 1175, when the wall was constructed. Its prosperous period was in the ninth and tenth centuries.

BEYROUT.—A Byzantine Relief.—In *R. Arch.*, fifth series, XII, 1920, pp. 334 f. (fig.) DU MESNIL DU BUISSON tells of the discovery of a Byzantine relief (vine-scrolls and birds) in a wall south of the mosque of the street Babel-Driss, sometimes called the Mosque of Saint Saviour, not far from the great mosque, the church of Saint John. Near this, important remains of a Byzantine basilica were found during the war. Perhaps the relief came from that church.

ITALY

ASSISI.—Panel Paintings in S.^a Chiara.—In *Cron. B. A.* VII, 1920, p. 55, the restoration of three thirteenth century paintings in Santa Chiara at Assisi is described. One of them is the oldest known representation of Saint Clara; the subjects of the other two are the Madonna with Angels and the Crucifixion.

All three are probably by one artist, the Maestro di San Francesco or a follower. The painting of Saint Clara is dated 1284.

BERGAMO.—**Jacopo Bassano.**—In *Dedalo*, I, 1920, pp. 392-394 (fig.), G. LORENZETTI publishes a painting of the Virgin and Child with St. John in the Galleria Frizzoni-Salis at Bergamo, which he attributes to Jacopo Bassano and to the period in which he was under the strong influence of Titian and Parmigianino.

CIVIDALE.—**An Embroidered Shroud.**—In *Dedalo*, I, 1920, pp. 7-16 (6 figs.), G. FOGOLARI publishes a piece of embroidery in the church of San Pietro in Valti at Cividale, which is extraordinary for its size, preservation, and excellence of workmanship and beauty of design. It is said to have belonged to the blessed Benvenuta Boiani of Cividale, but the iconography of the design makes it impossible to date it earlier than the beginning of the fourteenth century, a little after the traditional date assigned to Boiani. The carefully worked figures and compositions of the embroidery are evidently drawn from illuminated manuscripts, of which Cividale has many fine examples.

FLORENCE.—**Renaissance Furniture.**—In *Dedalo*, I, 1920, pp. 47-52 (5 figs.), A. LENSI writes on the recent attempt to collect in the Palazzo Vecchio some pieces of sixteenth century furniture that will reconstruct, as far as possible, the original atmosphere of the rooms. The finest piece so far obtained, and at the same time one of the most precious examples of sixteenth century furniture extant, is the *banco da magistrato*. The master who carved the seven caryatids with which the coffer is decorated must be sought among the famous wood-carvers of Florence, such as Battista del Tasso.

Gifts to the Museo Nazionale.—In *Cron. B. A.* VII, 1920, p. 56, notice is given of a recent bequest to the Museo Nazionale, Florence, of a fifteenth century North Italian wooden polychrome group of the Pietà and a collection of thirty-two bronze bells, mostly of the sixteenth century and of different types.

MONSELICE.—**A Limoges Enamel.**—In *Dedalo*, I, 1920, pp. 40-46 (pl.; 2 figs.), A. MOSCHETTI publishes a fine enamel plaque, representing the enthroned Christ surrounded by the symbols of the Evangelists, all executed in relief and interspersed with inserts of colored stones, which belongs to the cathedral of Monselice and has hitherto remained unnoted. Comparison with Limoges examples, particularly a reliquary casket of San Calmino at Mozac, proves that the enamel in question is of Limoges workmanship and belongs to the second half of the twelfth century.

PADUA.—**Marco Palmezzano.**—In *Dedalo*, I, 1920, pp. 363-368 (3 figs.), A. MOSCHETTI adds to the fourteen already known paintings of the Christ bearing the Cross by Marco Palmezzano a painting in the Ferretto collection at Padua. The picture is of special interest because of the background, where gondolas appear. This detail, added to the more indirect evidences of Venetian influence which have already been noted in Palmezzano, make almost certain the conclusion that at some time the artist visited Venice.

RIMINI.—**Malatesta Textiles.**—In *Rass. d'Arte*, VIII, 1921, pp. 93-100 (pl.; 7 figs.), G. SANGIORGI describes the fragments of textiles taken recently from the tomb of Sigismondo Pandolfo Malatesta in the Tempio at Rimini. The rich costume in which the lord of Rimini was buried has lost most of its splendor through decomposition of four and a half centuries, but enough re-

mains to show the designs of the brocades and something of the general arrangement of the clothing. The finest fragment is from the trimming on the girdle, purple velvet embroidered in gold.

ROME.—Mediaeval Sculpture.—In contrast to the wealth of extant mediaeval painting in and near Rome, the poverty of sculptural remains is striking. This fact adds importance to F. HERMANIN's publication in *Dedalo*, I, 1920, pp. 217–223 (pl.; 6 figs.), of several pieces of mediaeval wooden sculpture lately installed in the new Museo del Palazzo Venezia. These include a twelfth century Madonna from Acuto, which must be by the sculptor of the so-called Madonna di Costantinopoli in Santa Maria Maggiore in Alatri, though it shows further advance than the latter and still retains its ancient polychrome and incrustated decoration. A second Madonna, from Celleno and a little later in date, shows, instead of the Byzantine influence evident in the Acuto group, clear Tuscan derivation of type. More interesting than the Madonnas, perhaps, are four heads of rafters from a twelfth century house in Rome. They are similar to the Acuto Madonna in technique, but are rougher and more vigorous, with a curious character at the same time monumental and grotesque.

The Angel of Amaseno.—An unusually fine Limoges enamel of an angel recently found in the sacristy of the church of Amaseno and now in the Museo del Palazzo Venezia is published by F. SAPORI in *Rass. d'Arte*, VIII, 1921, pp. 30–31 (pl.). It is impossible to recognize the author of the work, but its date is the end of the thirteenth century, and a close comparison to it is offered by the reliquary of Santa Barbara in the treasury of San Giovanni in Rome, though the latter is inferior in technical execution and in design.

URBINO.—Stucco Decoration.—In *Rass. d'Arte*, VIII, 1921, pp. 16–20 (5 figs.), L. SERRA describes some ceiling reliefs lately taken from the Palazzo Corboli to the Galleria Nazionale, Urbino. They represent the best work of the sixteenth century artist F. Brandani, and are excellent examples of the continuation of the pictorial style of Ghiberti.

FRANCE

AIX.—A Bust of Francesco Laurana.—In *L'Arte*, XXIII, 1920, p. 270 (pl.), A. VENTORI publishes a bust of an unknown child in the museum of Aix, Provence, which, in its refined treatment of surface, is unsurpassed by any other works of its master, Francesco Laurana.

PARIS.—Acquisitions of the Louvre.—In *Burl. Mag.* XXXVII, 1920, pp. 63–70 (2 pls.), P. JAMOT describes some of the most important Italian, Flemish, and Dutch paintings acquired by the Louvre during the war. They include, among others, a tondo of Love and Chastity, probably by Sodoma; Ixion deceived by Juno, one of Rubens' best mythological paintings; a portrait by Frans Hals; Farmyard on a Winter Morning, by Peter Brueghel the elder; and The Ship of Fools, by Jerome Bosch. Most of the finest of the new acquisitions came from the Schlichting collection and the gift of M. Camille Benoit. Among newly acquired examples of French art a Pietà of about 1400 is important; it comes from the same studio, perhaps the same hand, as a little Entombment in the Louvre, and both show affinity with a series of fine miniatures by Jacquemart de Hesdin (*Ibid.* pp. 152–161; 3 pls.).

GERMANY

BERLIN.—A Statuette by Riccio.—In *Jb. Preuss. Kunsts.* XLII, 1921, pp. 1-4 (pl.; 2 figs.), W. v. BODE publishes a bronze statuette of a nymph with a vase, recently given to the Kaiser Friedrich Museum. It bears the unmistakable characteristics of the work of the sculptor Riccio and by its size, composition, and decorative accessories shows itself to be a pendant to the artist's statuette of Pan in the Ashmolean Museum. The vases which the figures hold in both cases indicate that the statuettes were intended for use on a student's table; one vase was probably to hold ink, the other sand.

A Plaque by H. G.—In *Ber. Kunsts.* XLII, 1921, pp. 62-66 (6 figs.) E. F. BANGE describes a circular silver plaque with a design in relief by H. G., to be dated about 1570. The subject of this work, which has been recently acquired by the Berlin museums, is allegorical. Saturn conducts Truth to meet the rising sun, and a demon of Night seeks to detain her. The composition is a reproduction of a design by Francesco Marcolini da Forlì (*Burl. Mag.* XXIII, p. 196, pl. I). Seven other examples of this relief are known.

A Seal Design of the Sixteenth Century.—In *Ber. Kunsts.* XLII, 1921, pp. 66-68 (3 figs.) W. F. VOLBACH describes a circular lead plaque in the Berlin museums, with a representation of Judith with the head of Holofernes. The figure also typifies Fortune, since it is winged and stands on a globe. A fine plaque with the figures of Mars and Venus, and another with the figure of a warrior in archaizing armor, now in the Berlin Münzkabinett, are examples of the same master's work. The designs were intended for seals.

Two Bronzes.—In *Ber. Kunsts.* XLII, 1920-1921, pp. 12-14 (3 figs.) W. VON BODE reports the acquisition by the Berlin museums of two bronzes: (1) a group of Hermes and Psyche, attributed to the *atelier* of Adriaen de Vries, a sculptor of the school of Gian Bologna; (2) a Florentine figure of St. Thomas, formerly interpreted by Dr. von Bode as St. John the Evangelist, but now shown to be the pendant of a gilded statuette of Christ, also in Berlin. The group is to be attributed to a pupil or follower of Andrea Orcagna.

A Tapestry by Hans Baldung.—In *Ber. Kunsts.* XLII, 1920-1921, pp. 1-5 (4 figs.) H. FEUERSTEIN and M. J. FRIEDLÄNDER discuss a tapestry representing the Vision of Saul, recently acquired by the Kaiser-Friedrich Museum. The coats of arms in the corners are the clue to its history and date, which can be determined as about 1540. It is attributed to Hans Baldung Grien.

A "Garden" Rug.—In *Ber. Kunsts.* XLII, 1921, pp. 54-59 (4 figs.) F. SAVE describes a rug recently acquired by the Kunstgewerbe-Museum in Berlin, and probably made in Eastern Anatolia about the end of the sixteenth century. It belongs to that type of rugs of which the design is an imitation of an oriental garden, with rectangular flower-plots, canals, and trees. There are two well-defined classes of "garden" rugs: one in which the trees, birds, and animals are somewhat naturalistic; another in which the plant and animal forms are much conventionalized. These usually show a canal running longitudinally through the design. The Berlin fragment belongs to the latter class.

AUSTRIA

VIENNA.—Michael Pacher.—In *Burl. Mag.* XXXVIII, 1921, pp. 38-44 (pl.), G. A. SIMONSON publishes two recently discovered paintings by Michael

Pacher now in the National Gallery in Vienna. They represent the Marriage of the Virgin and the Flagellation of Christ, and, among the very few uncontested paintings by Pacher, they will prove of great importance in the interpretation of his style, which so successfully combines northern and southern characteristics.

Rubens.—In *Z. Bild. K.* XXXII, 1921, p. 18 (pl.) H. TIETZE publishes a hitherto little known portrait of Helène Fourment in private possession in Vienna. The lack of finish and necessary details in the work, and its spontaneity make it evident that this was the immediate nature study for the portrait of Helène in the family group by Rubens in the Rothschild collection, Paris.

Tapestry Exhibition.—The treasures brought to public view in the recent exhibition in Vienna of a hundred specimens of tapestry from the collection of the Hapsburg family are discussed by E. H. BUSCHBECK in *Burl. Mag.* XXXVII, 1920, pp. 123-130 (3 pls.). Such examples as the series representing the story of Abraham by Berneart van Orley show the independent merits of tapestry art. It is not an imitation of painting, but has quite different problems to solve.

GREAT BRITAIN AND IRELAND

CAMBRIDGE.—Early Italian Pictures.—In *Burl. Mag.* XXXVII, 1920, pp. 289-303 (4 pls.), O. SIRÉN publishes a few of the pictures left by the late Mr. B. Marlay to the Fitzwilliam Museum in Cambridge, which have, with few exceptions, remained quite unknown to the public up to the present time. While there are no great masterpieces in the collection, there are many well-preserved pieces, particularly of fourteenth and fifteenth century Florentine and Sieneese painting, which will have much interest for students.

DUBLIN.—An Irish Shrine.—In *The Antiquaries Journal*, I, 1921, pp. 48-51 (pl.; 2 figs.), E. C. R. ARMSTRONG reports that the Royal Irish Academy has acquired a portion of an Irish shrine from the collection of Sir Benjamin Chapman, Killua, County Westmeath. It is semi-circular in shape and is made of cast bronze plate, gilt in front. On the front is a conventionalized representation of a man, holding the lower jaws of two equally conventionalized animals. Below the animals on either side of the man are large discs. In the centre of each is an amber half bead, from which four arms radiate, forming a cross. The back of the shrine has a raised border with interlacing pattern, a raised cross with an amber half bead in the centre, and conventional representations of animals. A fragment which is supposed to be a part of the same shrine shows a cross ornamented with amber, and has spiral decoration between the arms of the cross. This indicates a fairly early date, and the shrine is accordingly attributed to the eighth century.

LONDON.—A Coffin-chalice and Paten.—In *The Antiquaries Journal*, I, 1921, pp. 56-57 (fig.) H. F. WESTLAKE illustrates a pewter chalice and paten found in a stone coffin which was accidentally discovered in the north transept of Westminster Abbey in 1913. The form of the chalice, which has a broad, shallow bowl, and a round stem and base, suggest that its date is the early thirteenth century, and that the coffin was that of Abbot Richard de Berkyng, who died in 1246.

A Tondo by Luca Signorelli.—In *Burl. Mag.* XXXVIII, 1921, pp. 105-106 (pl.), R. FRX publishes a painting of the Holy Family with Saints which

has come recently into the possession of Messrs. Lewis and Simmons from a private collection in Ireland. On the back of the panel is inscribed the name Pietro Vanucci, but that is probably an eighteenth century addition. The characteristics of the work ascribe it clearly to Signorelli and the date must be about 1490.

An Altarpiece by Marco Zoppo.—In *Burl. Mag.* XXXVIII, 1921, pp. 9–10 (pl.), T. BORENIUS reproduces three panels, belonging to the Ashmolean Museum, the National Gallery, and Mr. Henry Harris, and representing respectively St. Paul, a Holy Bishop, and St. Peter, which he believes originally formed a part of a large altarpiece by Marco Zoppo.

A North Italian Altarpiece.—In *Burl. Mag.* XXXVII, 1920, pp. 95–96 (pl.), T. BORENIUS publishes an altarpiece representing three saints which was once in the Rinuccini collection at Florence, was for some years lost sight of, and now belongs to Lady Belper. The work figured some years ago in the dispute as to "Maestro Piero Peroxini." Though signed with the name of Perugino, Crowe and Cavalcaselle's ascription of the altarpiece to Pellegrino da San Daniele appears most satisfactory.

A Woodcut after Pordenone.—In *Burl. Mag.* XXXVII, 1920, p. 61 (pl.), C. DODGSON publishes a woodcut, recently acquired by the British Museum, which is a contemporary copy of Pordenone's fresco of Marcus Curtius painted in the Casa d'Anna in Venice and praised by Vasari and Dolce. The woodcut is a beautiful one, in the chiaroscuro manner, printed in black and two shades of a pale greenish yellow.

Drawings by Aert Claesz.—Two drawings recently acquired by the British Museum are of especial interest as being more certainly attributable to Aert Claesz of Leyden (1498–1564) than any other known works. They are not only ascribed to that artist by old tradition, but their style agrees with Van Mander's description of the work of Claesz. The drawings are circular designs for glass and represent two scenes from the Passion. (C. DODGSON, *Burl. Mag.* XXXVIII, 1921, pp. 25–26 (pl.).)

NORTH CERNEY.—A Portrait of Archduke Ernest.—In *Burl. Mag.* XXXVII, 1920, pp. 184–190 (pl.), A. VAN DE PUT publishes a miniature portrait owned by Rev. E. O. de la Hey, of North Cerney, Cirencester, in which it may be possible to recognize Otto Vaenius' original from which Gisbert Vaenius made his engraving, of which there is a print in the British Museum.

OXFORD.—A Stolen Brass.—In April, 1921, a brass representing Alderman Richard Atkinson and his two wives was stolen from the church of St. Peter-in-the-East, Oxford. It is 19 inches high and 6½ inches wide and bears the date 1574. Any information in regard to it should be sent to the Oxford Architectural and Historical Association, Ashmolean Museum, Oxford.

UNITED STATES

BOSTON.—Recent Acquisitions of Prints.—In *B. Mus. F. A.*, XVIII, 1920, pp. 56–62 (18 figs.), F. C(ARRINGTON) describes a number of prints acquired from the sale of the J. P. Heseltine collection. Some of the most important of these are by such artists as Girolamo Mocetto, Benedetto Montagna, Martin Schongauer, and Israel van Meckenem.

CAMBRIDGE.—A Florentine Double Portrait.—In *Art in America*, IX, 1921, pp. 137-148 (pl.; 4 figs.), F. M. PERKINS publishes a double portrait of two standing poets, one of whom is unmistakably recognized as Dante, the other probably representing Petrarch. Painted in about 1430, this is the earliest panel picture of Dante known to be extant. Though of special interest iconographically, the artistic merit of the work is not insignificant. Ambrogio Lorenzetti was formerly believed to be its author; but since it has come into



FIGURE 4.—BELLINI'S FEAST OF THE GODS: NEW YORK.
(From *Art in America*)

the collection of the Fogg Museum in the past year it has been recognized as the production of the Florentine, Giovanni dal Ponte.

MINNEAPOLIS.—A Court Cupboard.—In *B. Minn. Inst. of Arts*, X, 1921, pp. 2-4 (fig.), R. H. publishes an English Elizabethan cupboard of about 1600. While some Italian characteristics are evident in the beautiful carved design, the spirit of Gothic informality about all the ornament shows the British resistance to Italian influence. A Flemish chest of the sixteenth century, another recent acquisition of the Minneapolis Institute of Art, is published *Ibid.* p. 20 (fig.).

NEW YORK.—A Newly Discovered Cimabue.—Of inestimable importance is the triptych of Christ, St. Peter and St. James in Mr. Hamilton's collection, New York, published by B. BERENSON in *Art in America*, VIII, 1920, pp.

251-271 (6 pls.), and ascribed to Cimabue. The principal basis for the attribution is the close similarity with Cimabue's paintings in the upper church at Assisi, but it is earlier than these, perhaps the earliest known work by the master, painted as early as 1272 in Rome. The almost perfect preservation of the triptych renders it of the greatest value for the study of the technique and coloring of the panel painting of the thirteenth century in Tuscany.

Bellini's Feast of the Gods.—In *Art in America*, IX, 1920, pp. 3-5 (pl.), M. L. BERENSON writes a short appreciation of the masterpiece by Giovanni Bellini recently acquired by Mr. C. W. Hamilton, New York (Fig. 4). The authenticity of the painting is beyond any question and it bears in Bellini's own handwriting his signature and the date 1508. The background is clearly Titian's but the figures are Bellini's.

Two Sienese Paintings.—In *B. Metr. Mus.* XVI, 1921, pp. 28-29 (fig.), B. BURROUGHS publishes two Sienese paintings added to the collection of the Metropolitan Museum. The earlier of the two, a painting of the Madonna, with a predella containing the Annunciation and the Nativity, is by a fourteenth century follower of Duccio. The second painting is a fragment of a decoration of a marriage chest by Francesco di Giorgio.

A Sienese Statue.—A terra-cotta statuette of a bearded saint, attributed to Lorenzo di Petro, called Il Vecchietta, has been acquired by the Metropolitan Museum and is briefly described by J. B(Reck) in *B. Metr. Mus.* XVI, 1921, pp. 14-15 (fig.).

A Pagan Painting by Rubens.—In *Art in America*, VIII, 1920, pp. 293-297 (pl.), H. B. WEHLE publishes Rubens' painting of Venus and Adonis now lent to the Metropolitan Museum by Mr. H. P. Bingham. The work presents the rich opulence and free creative genius that characterize the middle period of Rubens' activity. According to Rooses, it was painted about 1620.

Italian Laces.—A brief description of the most interesting of the early Italian laces lately acquired by the Metropolitan Museum of Art from the Ida Schiff collection is published by F. M. in *B. Metr. Mus.* XVI, 1921, pp. 29-32 (2 figs.). Beautiful altar cloths of the sixteenth century, quaint fascias such as those one sees represented on the babes in della Robbia's frieze of the Spedale degli Innocenti in Florence, and bobbin laces worked from designs that originated in well-known sixteenth century pattern books are among the treasures of the collection.

PROVIDENCE.—**Andrea di Giovanni.**—A panel picture of the Madonna and Child recently acquired by the Rhode Island School of Design is published by R. v. MARLE in *Art in America*, IX, 1921, pp. 102-106 (3 figs.). The work is to be attributed to Andrea di Giovanni, as is shown by a comparison with that artist's paintings at Orvieto. The Sienese quality of it is explained by the fact, already pointed out, that painting at Orvieto was dominated at this time by the artistic tradition of Simone Martini.

El Greco.—In *B. R. I. Sch. Des.* VIII, 1920, pp. 26-27 (fig.), L. E. R(owe) publishes a painting of St. Andrew by El Greco, recently acquired by the Rhode Island School of Design. The work belongs to the artist's last period, when he became less eccentric and more like other painters, while still retaining his power and his mastery of technique.

WORCESTER.—**A Fourteenth Century Madonna and Child.**—In *B. Worc. Mus.* XI, 1920, pp. 26-29 (2 pls.), R. W. publishes an attractive Madonna and

Child, in Worcester. They are French sculpture of the fourteenth century, and a good example of the breaking away from the severity and simplicity of earlier art and the substitution of intimacy and grace.

Painted Glass.—In *B. Worc. Mus.* XI, 1921, pp. 79–83 (3 figs.), E. I. S. uses pieces of English and Flemish glass recently acquired by the Worcester museum to illustrate the development through which glass work went from the twelfth century to the eighteenth, and the varying relationships between glazier and painter which this development involved.

A Late Gothic Panel.—In *B. Worc. Mus.* XI, 1921, pp. 74–76 (pl.), R. W. publishes a late Italian Gothic panel of the Madonna and Child owned by the Worcester museum. The work belongs to the early years of the fifteenth century but still retains, in the softening of its contours, much of the archaic spirit. Perhaps it is to be attributed to Ambrogio di Baldese, who is represented by a triptych in the Jarvis collection at Yale.

A Fifteenth Century Spanish Painting.—A Spanish painting of the Madonna with Saint and Donor, which shows both Sienese and Flemish influence, has been acquired by the Worcester museum and is published by R. W. in *B. Worc. Mus.* XI, 1921, pp. 66–68 (pl.).

Ottaviano Nelli.—In *Art in America*, IX, 1920, pp. 21–24 (fig.), U. GNOLI and R. OFFNER write on a panel painting of the Adoration of the Magi in the Museum of Art at Worcester, which they ascribe to Ottaviano Nelli and date in the early years of the fifteenth century.

Antonio da Viterbo.—An adoration of the Child Jesus in the Museum of Art, Worcester, is attributed by U. GNOLI in *Art in America*, IX, 1920, p. 24 (fig.), to Antonio da Viterbo. From the close similarity it shows with the style of Pinturicchio, one may conclude that it was executed after the collaboration of Antonio with that master in Orvieto and in the Borgia Apartment of the Vatican, and, therefore, probably about 1500, when the artist returned to his native town.

A Flemish Portrait.—In *B. Worc. Mus.*, XI, 1921, pp. 71–72 (pl.), E. I. S. publishes a painting in the Worcester museum which some have thought to be a portrait of Eleanor of Portugal. The work is too late for such an identification, belonging to the early sixteenth century, and it may have been done by the "Master of the Half Figure."

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ROMAN PORTRAITS AT CORINTH. III. GAIUS AND
LUCIUS CAESAR
MOZARABIC ART IN ANDALUCIA
FRANCESCO DI GENTILE DA FABRIANO
ALTAR OF MANLIUS IN LATERAN
ARCHAEOLOGICAL DISCUSSIONS (January-June, 1921)

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AN ASKOS BY MACRON

THANKS to a series of gifts from Mr. Edward Warren, the Museum of Bowdoin College possesses a small but choice collection of Greek vases. Most of these have been described in the annual reports of the College, and many of the red-figured pieces find a place in my *Vases in America*.¹ One of the more recent



FIGURE 1.—ASKOS AT BOWDOIN COLLEGE.

acquisitions is the singularly attractive little vase reproduced in Figures 1-3. It measures 6.2 centimetres in height, and 8.2 in diameter. It was bought from a Greek, but the provenience is unknown. My thanks are due to Mr. Warren for allowing me to study the vase while it was still in his possession.

The shape is that which modern scholars have agreed to call an askos; what the ancients called the shape we do not know. The askos has a long history: vases constructed on the same general principle as ours are common in Greek lands, and in lands affected by Greek civilization, from a very early period to a very

¹ V.A. p. 206. In Hoppin's *Handbook of Red-figured Vases*, I, p. 370, No. 12a-b, the Bowdoin fragment by the Euergides painter (No. 50 in my list of his works, *J.H.S.* XXXIII, p. 354) is incorrectly combined with the fragment in Brunswick (Germany), *ibid.* p. 352, No. 31.

late.¹ The ascoid shape suggested an animal, a bird, and the potter was often tempted to add a short tail and a dove's or a duck's head. This temptation was resisted by the inventors of the type of askos which is figured by Lau and by Genick among their illustrations of Greek vase-forms²: the constructional motive is not mimetic here, but aesthetic: the lines of the design are wonderfully simple, bold and harmonious.

Askoi of the type figured by Lau and Genick become common in Attic pottery of the transitional period between the archaic style and the free, and persist till late in the fourth century. It is to this type, far the commonest, that the Bowdoin vase belongs: it differs somewhat from the canonical shape by its slightly narrower foot and slightly higher breast.³

The Bowdoin vase is earlier than any of the askoi which exhibit the canonical shape, for it is clearly of the ripe archaic period, between 490 and 480 B.C. The earliest canonical askos is E273 in the British Museum, and that is distinctly later than ours. The Bowdoin vase forms a link between the canonical askos and a much earlier specimen—the vase in Orleans published by Mrs.

¹ Mayer, *Askoi*, in *Jb. Arch. I. XXII*, pp. 207–235; Myres, *Cesnola Collection*, pp. 15–16. Mayer pays little attention to the Attic askoi, and Myres is not concerned with them.

² Lau, *Die griechischen Vasen*, pl. 24, 4; Genick, *Griechische Keramik*, pl. 32, 4. Summary representations in Furtwängler, *Vasensammlung im Antiquarium*, pl. 6, No. 242, and Cecil Smith, *Catalogue of Vases in the British Museum*, III, p. 17, fig. 16 = Walters, *Ancient Pottery*, I, p. 200, fig. 62.

³ The following forms of askos are used by Attic potters of the red-figured period: (1) Our type. (2) Like 1, but the middle of the upper surface moulded in imitation of a lid (see No. 7). Examples: Cairo 26214 (Edgar, *Greek Vases*, pl. 12); Naples (Gabrici, *Mon. Ant. XXII*, pl. 104, 5); B.M. F34, F120 and 1867.5–12.46. All fourth century. (3) Like 1, but the body tubular: Naples, Santangelo 226 (Heydemann, *Vasensammlung in Neapel*, pl. 3, 178). In Oxford 331, a trefoil (oenochoe) spout is substituted for the ordinary one. (4) A taller type, the top flattened, a small cylindrical passage is usually sunk through the body vertically: Furtwängler, *Vasensammlung*, pl. 16, No. 236; B.M. T511. (5) Like 4, but no passage, and two spouts, one of the usual kind, the other trefoil-shaped: *Cat. Coll. Dr. B. et M. C.* pl. 24, No. 184. (6) Shape as 1, but the handle, instead of being overarching, is a ring set vertically at the side of the vase: B.M. E766. (7) Like 6, but a circular filling-hole in the upper surface, generally with a sieve bottom: Cab. Méd. 859 (De Ridder, pl. 24); Morin-Jean, *Le dessin des animaux en Grèce*, p. 128; B.M. F33 and E763. The hole could no doubt be furnished with a lid, which explains 2. (8) Like 7, but the spout shaped as a lion's head. *Cat. vent. 11–14 mai 1903*, p. 55 (No. 164); *Sammlung Vogell*, pl. 3, 23; Morin-Jean, *op. cit.* p. 184; B.M. E74. (9) Vases in the shape of a crab's claw: B.M. 1905.7–10.9 (Gargiulo, *Recueil*, 4, pl.

Massoul and rightly assigned by her to an Ionian fabric.¹ The Orleans vase, from the style of the heads which adorn it, can hardly be later than the middle of the sixth century. The shape is heavier, less athletic, than in the Bowdoin askos, but the later shape is obviously derived from the earlier. The lineage of this class of askos can be traced farther back. Vases like the Orleans askos must be descended from an earlier and larger type of vase, an example of which has been found at Naukratis.² The askos from Naukratis, which is decorated with bands of animals in the style characteristic of eastern Greece—Rhodes and Asia Minor—and cannot be later than the earlier part of the seventh century, evidently goes back, in its turn, to the late Mycenaean type represented by a vase from Haliki near Phaleron.³

One of the principal characteristics of the Attic type figured by Lau and Genick is the grand, free span of the handle: in the Orleans vase the handle is smaller in proportion to the body; in the vase from Naukratis and Haliki it is smaller still, and it runs from the neck, not to the farther end, but to the middle of the back. The Attic type makes one think of some bold Gothic arch, compared with the hesitating experiments of earlier builders. The full-spanned handle is found, it is true, in earlier ascoid vases, but chiefly where the body is tubular.⁴

23; *Burlington Catalogue* 1903, pl. 97, I 68); B.M. E765 (Panofka, *Cabinet Pourtalès*, pl. 30); B.M. WT63. (10) Vases in the shape of a duck, with black-figured ornamentation; not earlier than the later part of the fifth century: Farmakovski, *Arch. Anz.* 1909, p. 175, fig. 40, from Olbia; Orsi, *Not. Scav.* 1913, supplement, p. 8, fig. 6, from Locri; B.M. B662-667. In the *British Museum Catalogue* (II, pp. 295-6) this group is included among the vases with designs on a white ground; the ground, however, is the red of the clay; white is sometimes used on the head of the duck. The spout of B662 is shaped like the mouth of a squat lecythus; B663 has a trefoil (oenochoe) spout; B664 and 665 an askos spout; in B666 and B667 an askos spout is substituted for the duck's head, the spout thus being at the head and not as in the others at the tail of the duck. (11) Black vases in the shape of a knuckle-bone, with overarching handle twisted and knotted.

¹ Massoul, *Revue archéologique*, 1918, 2, p. 19: height 8 cm., diameter 9 cm. Of somewhat similar shape are the sixth century Ionian askoi from Olbia, Farmakovski, *Arch. Anz.* 1911, p. 223, fig. 29, and 1912, p. 358, fig. 47.

² B.M. 1888.6-1.462: *Naukratis*, 2, pl. 5, 1. The lip, and most of the handle are modern; the remains of the handle show that it is correctly restored.

³ Berlin 43, Furtwängler-Loeschke, *Mykenische Vasen*, pl. 18, 127. Height 13 cm. A remoter ancestor is the pre-Mycenaean type illustrated by Wace and Blegen, *B.S.A.* XXII, pl. 6, 1.

⁴ Delphi, *Fouilles de Delphes*, 5, p. 11, fig. 39 (sub-Mycenaean); Berlin 304, Boehlau, *Jb. Arch. I.* III, p. 341, fig. 22 (Boeotian geometric); Louvre A47, Pot-

The Orleans vase belongs to about the middle of the sixth century, the Bowdoin vase to the second decade of the fifth. It is natural to ask whether there are any vases which come between the two.

I do not know of any red-figured askoi which are certainly earlier than the Bowdoin vase.¹ A black-figured Attic askos, of the same general type, is mentioned by Furtwängler in his catalogue of the Berlin collection²: it is a late black-figured vase, but



FIGURE 2.—ASKOS AT BOWDOIN COLLEGE: SIDE A.

how late I cannot tell, for I have not seen it. It may be no earlier than the Bowdoin vase.

I am unable, therefore, to point to any intermediaries linking the Bowdoin askos with the askoi of the same period as the vase in Orleans. But it may well be, indeed it is extremely likely, that askoi of the Orleans and Bowdoin type were made in Attica long before the year 490; although they need not have been decorated

tier, *Album*, pl. 6 (Cypriot); B.M. C309, Walters, *B.M. Cat.* I, 2, p. 58, and C310 (Cypriot); Louvre D114, Pottier, *Album*, pl. 32 ("Italo-Corinthian"); see also the type Furtwängler-Thiersch, *Aegina*, I, p. 436 and pls. 121, 40, and 124, 5; *Naukratis*, 3, pl. 16, 19; Orsi, *Mon. Ant.* XVII, p. 106, fig. 69; p. 114, fig. 80; and p. 211, fig. 166 (one of these found with a Corinthian vase). See also Johansen, *Sikyoniske Vaser*, pp. 34–35.

¹ The askos Boston 13.169, by the Tyszkiewicz painter (*V.A.* p. 55) is of the same period as ours, and may be a little earlier. Unfortunately it is a fragment; the picture is preserved, but spout, handle and lower part are missing. The picture extends over the whole upper surface of the vase, as in B.M. E766 (see note 4, No. 6).

² *Vasensammlung im Antiquarium*, No. 2107; "shape No. 242, but the handle lower." The following vases I cannot date precisely, but they may belong to the late sixth century: Orsi, *Mon. Ant.* IX, p. 250, fig. 40; Gabrici, *Mon. Ant.* XXII, pl. 69, 2, found with a late b.f. Attic lecythus; Orsi, *Röm. Mitt.* XIII, p. 331, fig. 41.

with figures, either in the black-figured or in the red-figured style. An analogy may be found in the history of another shape, the bell-crater. The earliest red-figured bell-craters, as I have observed elsewhere,¹ are four vases decorated by the Berlin painter and datable between 490 and 480 B.C.: there are no black-figured examples. But we find *representations* of bell-craters well before 490, for instance, in the cups of the Euergides painter, which belong to the later part of the sixth century. The bell-



FIGURE 3.—ASKOS AT BOWDOIN COLLEGE: SIDE B.

crater existed before the Berlin painter; only, it was not one of the shapes which the vase painters chose to decorate; it was a rough, homely vessel of coarse, perhaps unvarnished clay. A day came when a maker of fine vases cast his eye upon it; the designer refined its shape; the painter glorified it with his art; and it took its place as a favorite with potter and with customer.²

The regular decoration of the Attic askoi is a single figure placed on either side of the vase, so that the two figures are separated by the overarching handle and the blank area below it. The most natural decoration of the segment was a figure broader than high; a human figure flying, creeping, seated, reclining; or the figure of an animal. Most of the askoi are decorated with such subjects. Upright human figures are rare.³ One or two askoi bear a couple of human heads⁴—the same form of decoration as was used by the Ionian painter on the vase in Orleans.

¹ *J.H.S.* XXXI, p. 283; *V.A.* p. 114.

² The same homely sort of vessel is at the back of a seventh-century Attic vase in Munich (1351: Hackl, *Jb. Arch. I.* XXII, pl. 1 and pp. 79–80). But the early makers of fine pottery did not retain the shape.

³ Naples 3201 (late fifth century).

⁴ B.M. E761; Oxford 328; B.M. E760. Cf. also B.M. F34 and F120, and Cairo 26214.

The decoration of the Bowdoin askos consists of two figures of Eros, one on each side of the vase, with an inscription. On one side Eros is flying to the left with a tendril in his left hand and a flower in his right (Fig. 2); on the other side, a second Eros flies to meet the first, his arms extended with the hands open, as if to greet his brother or to take the flower (Fig. 3). The first Eros I shall call A, the second B. Relief-lines are used for the contour of the figures, with the usual exception of the hair, and for the main inner markings; the secondary inner markings are rendered in brown. Red is used for the wreath of A and for his flower, white for the tendril, for B's wreath and for the inscription:



FIGURE 4.—FIGURES OF EROS: ASKOS AT BOWDOIN COLLEGE.

HOΓA¹Σ on one side, KAΛOΣ on the other. A fracture has removed B's toes and part of his calves. The brown lines on A's thigh and on the lower part of B's legs are difficult to make out, for here the surface of the vase has been chafed. The black of the background has encroached upon the outline of B's left hand; the original relief-lines are still visible, and are given in the drawing (Fig. 4).

The vase is not signed, but the style of the figures speaks a clear language. The painter of the vase was Macron, the artist whose name is preserved on a magnificent cotyle in Boston,¹ and who

¹ F.R. pl. 85: Hoppin, *Handbook*, II, pl. 53. A list of Macron's vases is given in *V.A.*, pp. 102-106. The following additions are to be made: a cup with the signature of Hieron, recently acquired by New York (interior, silen and maenad; exterior, symposion); a cup in the Villa Giulia (3575: interior, man with cuttlefish; exterior, silens and maenads); another in the same collection (interior, youth with flower: exterior, males); fragments of three cups in Florence (exterior, komos; exterior, head of Dionysus; exterior, silens); and a rough column-crater in Capt. Spencer Churchill's collection at Northwick Park (A. Arming; B. Heracles and Alcyoneus).

No. 52 in my list is now in Leipsic, as Dr. Langlotz kindly informs me; No. 83

painted most of the vases bearing the signature of the manufacturer Hieron, besides a great many which bear no signature at all. We need not be surprised to find a painter of big vases decorating a tiny pot like this: the painter of the François vase set his name to a cup which has no other decoration beyond a design of four little fishes, exquisitely grouped, two pairs of palmettes, and two signatures.¹

The style of Macron is pretty well known: in the Bowdoin vase, I would draw particular attention to the flat skulls, the features of A's face and his right hand, the ankles, the pair of brown lines on each breast, and the brown line at the lower edge of the shoulder; of the tendril and the wings I shall say something later.

Erotes by Macron. The mind turns to one of the artist's masterpieces, the splendid Judgment of Paris which he painted for Hieron,² where the third of the rival goddesses, Aphrodite,

is published in *Not. Scav.* 1895, p. 304, fig. 17. Nos. 22, 36, 59, 63 and 65 are published, for the first time, in Hoppin's *Handbook*. Good photographs of Nos. 44 and 71 have now been issued by Alinari (35797-35799, and 35806-35808).

The following cups belong to the school of Macron; some of them link him with the Telephus painter, who also worked for Hieron:—Villa Giulia (interior, youth leaning on stick; exterior, woman and males); Florence 81602 (interior, young komast; exterior, women and youths); B.M. E66 (F.R. pl. 47, 2, and 1, p. 264); Cab. Méd. 812 (De Ridder, pls. 21-22 and p. 471); Orvieto, Faina, 105 (*A.Z.* 1877, pl. 6); Florence 4219 (interior, Eros; exterior, only feet remain); B.M. E80 (Cecil Smith, *B.M. Cat.*, pl. 5); Bonn (interior, Winter, *Die jüngeren Attischen Vasen*, p. 7); Louvre G384 (interior, athlete with acontion; exterior, athletes); Louvre G477, fragment (A. woman with box; B. women); Louvre G389, fragment (exterior, youth between man and youth); Petrograd 668 (Gargiulo, *Recueil* (1861), 5, pls. 10-11); Boston, fragment (see *V.A.* p. 109); Munich 2652 (interior, silen fluting; exterior, silens and maenads); Orvieto, Faina, 169 (interior, man in himation; exterior, komos); New York, GR 568 (see *V.A.* p. 109); Cat. Méd. 813 (Caylus, *Recueil*, 2 pl. 37). The five last vases may well be by the Telephus painter. A list of the Telephus painter's works is given in *V.A.* pp. 107-109, and is to be increased by the following cups: Naples 2608; Florence, from Chiusi (interior, silen; exterior, komos); formerly in private possession at Athens (detail, Heydemann, *Griechische Vasenbilder*, pl. 10, 2); B.M. 1910, 3-7, 10, fragment (interior, head of athlete); Florence, fragment (youth with halteres); and a fragment from south Russia (*Izvestiya*, XIII, p. 182).

I take this opportunity of adding two numbers to my list of vases by the Briseis painter, who follows the Telephus painter in *Vases in America*: the Nolan amphora in Naples, 3198 (A. woman with phiale and oenochoe; B. old man), and the column-crater in Naples, R.C. 146 (Fiorelli, pl. 15; *Bull. Nap.*, new series, V, pl. 10, No. 19).

¹ G. and A. Körte, *Gordion*, pl. 7 and p. 141.

² Berlin 2291: *W.V. A.*, pl. 5; Hoppin, *Handbook*, II, p. 43.

veiled and holding a dove and a flower, is surrounded by a bevy of Erotes, who hover about her with flowers, chaplets and necklaces in their hands (Fig. 5). In the Bowdoin vase, the chests of the figures are nearly frontal, but the other parts of their bodies are in almost pure profile: the two Erotes are flying to meet each other, straight to right and straight to left. In the Berlin vase, the artist has set himself a more complex task; he is clearly concerned to make the Erotes look as if they were flying round their



FIGURE 5.—DETAIL OF CUP WITH SIGNATURE OF HIERON: BERLIN.

mistress; he is trying to suggest the third dimension and to give the group a certain measure of depth. The heads are in profile, turned towards Aphrodite; but three of the Erotes have one leg frontal and the other bent behind it; they are to be thought of as moving towards the spectator. Aphrodite is ringed round by a zone of attendant loves.

The attitude of the fair-haired Eros on the signed cotyle in Boston,¹ as he flies along beside the beautiful Helen and busies himself with her hair, is not quite the same as any in the Bowdoin or Berlin vases (Fig. 6). As Helen steps leftward, Eros flies past her in the same direction and turns round towards her forehead;

¹ F.R. pl. 85: Hoppin, *Handbook*, II, p. 53.

his feet are not seen, but one leg is in three-quarter profile and the other crosses behind it. The movement is obliquely towards the spectator.

Both in the Berlin cup and in the Boston cotyle, one notices the same curious way of attaching the wings to the body as in Eros B on the Bowdoin askos. The right wing of B is attached to the front of his shoulder, covering it, instead of to his back. This is an old rendering¹ which Macron preserves, not always,



FIGURE 6.—DETAIL OF COTYLE SIGNED BY MACRON: BOSTON.

but in figures where the arm passes across the hither side of the body.

That Eros should carry a flower in his hand is intelligible enough. Long before the appearance of any figures which can be given the name of Eros, winged spirits bearing flowers or tendrils were familiar to the Greeks.² When Eros himself comes to be represented by Greek artists, in the latter half of the sixth century,³ they gave him the same attribute which had been borne by his nameless predecessors. Not thoughtlessly: it may even be that they had in mind the further meaning of the word *anthos*; their Eros is in a double sense *παῖς καλὸν ἄνθος ἔχων*.⁴

¹ E.g., Murray, *Designs*, No. 10.

² Clay relief from the Argive Heraeum, *Argive Heraion* II, pl. 49, 1; Etruscan bronze plaque from Montecalvario, *Not. Scav.* 1905, p. 236.

³ *Lewes House Collection of Ancient Gems*, pp. 27 and 28.

⁴ Theognis, 994.

The man who conceived the *Laus Helenae* on the Boston cotyle—and there is no reason whatever to suppose that Macron did not conceive and design the picture as well as execute it—had an endlessly subtle and lofty imagination. But that Macron had any subtle thought in his head when he placed a flower in the hand of his Eros is naturally more than we can affirm. His fathers before him had given Eros a flower: and Macron himself was freer with his flowers than most of his fellows.¹

The flower which the Bowdoin Eros holds, hardly visible, I fear, in the illustrations, is of Macron's favorite species; broken from such a tendril as Eros holds in his other hand. The tendril I take to be a kind of smilax. Tendrils like this are not uncommon in his pictures: Hera holds one in his Berlin Judgment of Paris; Athena also, and Euopis on the other side of the vase; the bearded lover, too, on the unsigned plate in Copenhagen;² and one of the ladies on the pyxis, from the Acropolis, in Athens, which is not only from the hand of Macron, but probably bears his signature as well.³ On a Hieron cup in London a woman is twining a wreath of smilax.⁴ Smilax wreaths are often worn in the red-figured vases of the earlier archaic period; there are splendid specimens in the works of Phintias and Euthymides;⁵ but in the ripe archaic period they become very rare, and in the free period there may be a few, but I remember none. The use of smilax, therefore, for garlands would seem to have died out about the beginning of the fifth century. I think this is why the poet Aristophanes mentions smilax in his picture of what the young Athenian was once and ought to be:⁶ the poet knew that smilax had been dearly loved in the good old days; he had seen it in pictures painted at the time when the men of Marathon were

¹ Hoppin figures 23 vases by Macron; on 14 of these there are persons with flowers in their hands (Hoppin's numbers 4, 5, 9, 12, 13, 16-18, 20-22, 26, 28, 29); often several on one vase. Of the other vases, I need only mention the cups in the Cabinet des Médailles (560; De Ridder, p. 421, fig. 103) and in Madrid (154; Leroux, pl. 18). The flowers are not confined to scenes between men and boys or men and women; Hermes offers Paris a flower (Hoppin, No. 4); men put flowers to their noses even when there are no boys or women present (Hoppin, No. 26).

² Hartwig, *Meisterschalen*, pl. 30, 1; not a cylix, as Hoppin calls it (*Handbook*, II, p. 98, No. 55).

³ Richards, *J.H.S.* 14, pl. 3, 2.

⁴ B.M. E61: *W.V. C* pl. 5; Hoppin, *Handbook*, II, p. 59.

⁵ F.R.H. pl. 112: F.R. pl. 33.

⁶ *Clouds*, 1007.

striplings; he associated it with the *τεττιγοφόραι, ἀρχαίῳ σχήματι λαμπροί*.¹

The face of Eros B is somewhat odd at first sight. Eros A has comely features of regular archaic type: B's face does not conform to any type of classical beauty, archaic or other. Yet I do not think that the painter's hand has gone astray; he meant to make one of his Erotes look comical. He had noticed what surprising faces some young children have, before the bones of the nose are



FIGURE 7.—DETAIL OF ARYBALLOS IN LOUVRE.

grown, when the upper lip seems to have got a long start of its handicapped competitor. Poulbot has drawn many such faces.

Parallel studies of elderly faces are common enough in the riper archaic and in the succeeding, transitional period: for instance, in the works of the Panaitios painter or the Sotadean vases. Child studies are less common: the closest analogy to the Bowdoin Eros is the priceless little lad on another vase of the same period, the cotyle by the Brygos painter in Boston.² Ten or fifteen years later, in the Sotadean period and circle, we have the Eros,

¹ *Knights*, 1331.

² Caskey, *A.J.A.* 1915, pls. 7-8 and pp. 130-134; the boy only, *V.A.* p. 90, fig. 58.

in the shape of a little lout, on the New York pyxis with the Judgment of Paris.¹ In the Bowdoin Eros, the characterization is confined to the face. In the New York Eros it extends to the body; comical though he be, he already makes one think of the earliest real child in Greek sculpture, the grave and lovely maiden of the relief in Brocklesby House.²

To conclude: it is worth while comparing the Bowdoin Erotes with another pair on a small vase of a slightly later period. At a hasty glance Figure 7 would seem to be taken from an askos; but it really represents the decoration on the shoulder of the round aryballos, with a picture of a clinic, which was formerly in Mr. Peytel's collection and has recently been presented by him to the Louvre.³ It is the work of a follower and imitator of Macron. The style is based on that of Macron, but the artist is trying to be livelier and more forcible; the modelling of the bodies is more muscular, and the movements more restless. It will be noticed that although both hither arms cross athwart the body, the artist does not follow Macron in clapping the hither wing to the front of the shoulder; the consequence is that with the more realistic bodies the wings look even less like real wings than Macron's, and more like those of pantomime fairies.

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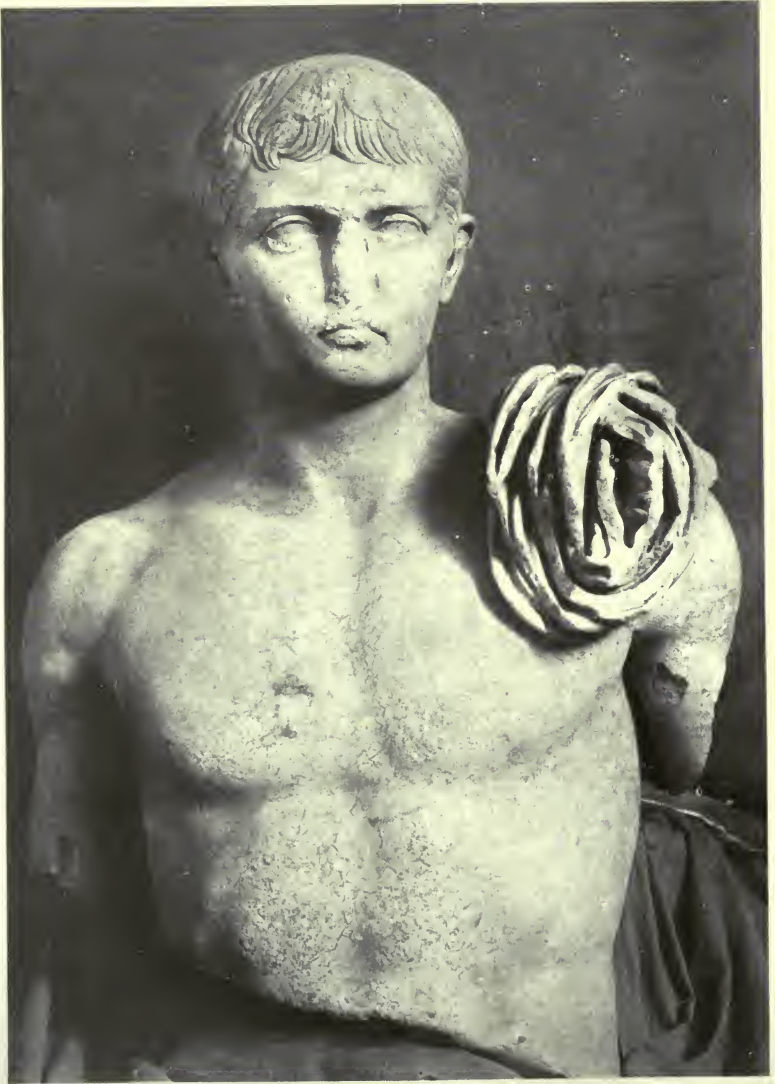
¹ Richter, *A.J.A.* 1915, pls. 29-30; *V.A.* p. 128.

² *Ant. Denk.* I, pl. 54: Curtius, *Das griechische Grabrelief*, pl. 6; see also Curtius, *Ath. Mitt.* XXXI, pl. 6 and pp. 178-184.

³ Pottier, *Mon. Piot.* XIII, pls. 13-14. Of similar style, the cups B.M. E66 (*F.R.* pl. 47, 2); Cabinet des Médailles 812 (*De Ridder*, pls. 21-22 and p. 471); and Orvieto, Faina, 105 (*A.Z.* 1877, pl. 6). Pottier compares the Peytel vase with the aryballos, Berlin 2326 (*A.Z.* 1888, pl. 8) which is also of the school of Macron. Pottier gives a list of vases of the same shape, or nearly the same, as the Peytel aryballos (*Mon. Piot.* XIII, pp. 162-165); see also *V.A.* pp. 87-88. The oldest of them is the vase which was formerly in Bologna (Pellegrini, *V.P.U.* pp. 56-57, No. 322); Pottier is inclined to connect it with Douris (*loc. cit.* p. 163), but it is obviously far earlier than even the earliest works of Douris; Pellegrini (*op. cit.* p. 56) is nearer the mark when he compares it with a cup in Munich (*Jb. Arch.* I. X, pl. 4); but there is no reason to associate either cup or aryballos with "Andocides." I owe my thanks to M. Pottier for allowing me to reproduce the Peytel Erotes.



PORTRAIT STATUE OF GAIUS CAESAR: CORINTH.



PORTRAIT OF LUCIUS CAESAR: CORINTH.

A GROUP OF ROMAN IMPERIAL PORTRAITS AT CORINTH

III. GAIUS AND LUCIUS CAESAR (PLATES X-XI)

WE have seen that the two members of the Corinthian group already discussed, *i.e.*, the Augustus and the Tiberius,¹ are in all probability to be considered as companion pieces, inasmuch as they are both represented under the guise of priest or pontifex. Of the two works to which we now turn our attention this holds true to an even greater degree. In fact they are so closely bound together through affinity of subject, type, scale, technique, etc., that it seems to me essential that they be here treated beneath a single heading, a conclusion amply justified, I think, by a glance at PLATES X and XI. That the youths represented by these portraits are blood relations, probably brothers, is self-evident; that they are also members of the family of Augustus seems equally assured by their remarkable resemblance in feature to the Augustan type. In fact this similarity is so striking that the better preserved of the two portraits (PLATE X), which was also the first member of the group to come to light, was immediately upon its discovery dubbed "the young Augustus,"—an attribution which we did not seriously question until after the unearthing of the genuine Augustus at a considerably later period of the campaign. For convenience of reference, therefore, it seems to me advisable to anticipate somewhat the argument expounded in the following pages, in so far, at least, as to indicate my belief that the portraits before us represent respectively Gaius and Lucius Caesar, the grandsons of Augustus. The more complete of the two works, as representing the elder of the pair, I shall designate Gaius, the other, of which the bust only is preserved, Lucius.

As was the case with respect to those members of the group already discussed, the Gaius and Lucius were both discovered

¹ Cf. the first two articles of the present series, *A.J.A.* XXV, 1921, pp. 142-159 and 248-265.

within the limits of the Roman basilica so often mentioned, the former just within the long southeast wall of the building (cf. *A.J.A.* XXV, 1921, p. 143, fig. 1), the latter nearly opposite, but six or eight meters farther west.

The Gaius was found lying apparently undisturbed and just as it had fallen, directly beneath the same stratum of broken Roman tile, fragments of marble revetment, and miscellaneous débris in which, it will be remembered, the statue of Augustus was discovered (cf. article on the Augustus, *A.J.A.* XXV, 1921, p. 144). The figure rested flat upon its back in a nearly horizontal position and seems to have settled gently downward through the rotting planks of the flooring of the upper story, without suffering any damage other than that incident to the fall from its original basis. To this first overthrow, which may or may not have taken place prior to the general ruin of the building, are, perhaps, due the few injuries sustained,—*e.g.*, the breaking of the right arm, which was found *in situ* beside the body, and the loss of the nose and the left forearm. The stratum of Roman tile, etc., which overlaid the statue was at this point rather thinly spread, while directly above it succeeded the usual accumulation of early Byzantine strata. Over the head and torso of the figure passed a rough wall of the post-classical period; its base, grounded in the stratum of broken tile, was formed of several huge architrave blocks, marble, and of the Ionic order. These seem to have originated from some unknown building farther up the slope. The statue itself rested at a depth of between four and five meters.

The portrait bust which I have designated as Lucius Caesar came to light at a considerably lower level, rather more than five meters beneath the surface and only a meter above hardpan. Nevertheless it had not enjoyed the undisturbed repose of its kindred portrait, but had clearly been tampered with subsequent to its fall. It was found lying on its back in a fairly thick stratum of late Roman débris which appeared to have been worked over in Byzantine times for the sake of the marble or other valuables it might have contained. The statue must have toppled from its pedestal and been more or less shattered when the basilica fell to ruin, at which time also the legs and lower part of the torso were lost, being in all probability hacked up and burnt for lime. The upper part of the torso, however, massive and not easily breakable, was mutilated and battered, after which it was apparently dragged to one side and rolled into a shallow trench in that portion

of the débris which had already been plundered. Subsequently it was covered over and forgotten.

The statue of Gaius Caesar, though considerably over life size, is yet on a slightly smaller scale than the Augustus, the difference in height between the two—assuming the restoration of the feet of



FIGURE 1.—GAIUS CAESAR: CORINTH.

the latter—being not less than .25 m.¹ The figure is preserved to its full height, the entire composition, save only the left arm, having been cut from a solid block of marble; this forearm, as is evident from PLATE X, was worked separately and attached by

¹ Dimensions are: height 1.98 m., height with plinth 2.07 m., length of right leg .995 m., from plinth to navel 1.195 m., from navel to chin .52 m., length of neck, front, .095 m., length of face .185 m., width of face .17 m., height of forehead .05 m., length of nose .07 m., width of mouth .055 m., length of right foot .32 m.

means of an iron dowel, the stump of which has expanded through oxidation and split both the arm and the drapery about it. Save for the loss of the nose, the thumb and index finger of the right hand, and the left forearm already mentioned, the statue is in almost perfect condition; a few unimportant fragments of drapery, however, have disappeared—three or four from the roll of the *chlamys* at the left shoulder, and another large piece from behind the upper part of the left arm.¹ The upper rim of the left ear is also slightly chipped and a shallow dent may be observed in the top of the head towards the front. Upon the upper surface of the plinth, and more particularly between the feet of the figure, there remain numerous traces of a coating of coarse stucco painted a dark red; no other unmistakable traces of pigment survived.² It is to be noted, however, that the lips and eyeballs are of a distinctly lighter shade than the remainder of the flesh surfaces and hence indicate clearly that they were at one time protected by a coating of paint; the difference in tone is sufficient to be marked even in a photograph (cf. Fig. 1).

As in the other members of the group, the material here employed is a fairly good grade of Pentelic marble in which may be detected an occasional silvery vein of schist; the block was so manipulated, however, that these do not appear noticeably in a front view of the figure. The back is further marred not only by the usual roughness of finish, but also by a considerable flaw in the stone itself in the region of the left shoulder. At this point the back is asymmetric, the left side being much flattened and roughened.

The statue is a nude male figure in heroic pose, the light *chlamys* being carried on the left arm and shoulder in the manner seen in the Hermes of Atalante.³ The weight of the figure is supported on the right leg, while the left is flexed at the knee and advanced.

¹ This is shown by a slight break in the drapery above, the rough working of the surface of the skin, and an "attachment boss" on the upper arm.

² On the front of the plinth between the feet appears a cutting for one half of a strong hook clamp, by means of which the plinth was made fast in its basis.

³ Cf. Dickins, *Hellenistic Sculpture*, fig. 41 and p. 56. The author remarks: "The work has been referred back to a Lysippic original, but it seems more likely that it is an Attic adaptation of the eclectic school now (*i.e.*, middle of third century B.C.) springing into existence." The type is preserved for us in a number of replicas (cf. *Gazette Arch.* II, 1876, p. 84, notes 1 and 2) and seems to have been popular and widespread in the late Hellenistic period. The work itself is of Pentelic marble and slightly over life size.

The left arm is bent at the elbow and the forearm is extended supporting the folds of the *chlamys* which fall along the thigh and leg and conceal the upper portion of the heavy supporting tree trunk which rises from the plinth behind the left heel. The right arm hangs naturally at the side with the hand half closed and the thumb forward, and seems to have held an attribute of some sort. This is indicated by a small hole drilled into the palm of the hand opposite the space between the tips of the third and fourth fingers. In consideration of the type of the figure I judge that the attribute could only have been a *caduceus*, of bronze and probably gilded. Many analogies may be quoted for the pose and the draping of the *chlamys*, most of which serve to indicate that we have here the usual "Hermes type" so characteristic of Hellenistic and Roman sculpture,¹ a type repeated with almost infinite variation in the later imperial portraiture.² The head is turned to the right, the gaze level and direct, and though not of great intensity the general expression may be characterized as that of alertness in repose; a slight Augustan frown is noticeable between the eyes. Like the other members of the Corinthian group, the statue gives no evidence of having been exposed to the weather, and must have stood under cover, either against a wall or within a niche.

The technique seems much like that of the portraits already discussed. The drill was used sparingly on the flesh surfaces, but much more freely in the undercutting of the drapery which is nevertheless most plastically and skilfully rendered, even to the indication of the leaden draping-weights at the lower edges.³ Slight traces of drilling are apparent at the inner corner of each eye and at the corners of the mouth, the parting of the lips being rendered by carrying the "drill line" across from corner to corner (cf. Fig. 2). Elsewhere on the body the drill was used only in the hair about the pubes, where is to be noted a most unusual and archaic technique in that the hair is done in round "snail-shell"

¹ In this connection it is interesting to note the passage of Athenaeus which tells us that Alexander liked to appear as Hermes (Athen. XII, p. 537E).

² Cf., for example, Commodus as Mercury in the Mantua museum, Labus, *Museo di Mantova*, III, pl. VI, p. 34 f.; Augustus as Mercury in the Museum of Rennes, *Gazette Arch.* I, 1875, pl. 36, p. 135; Tiberius as Mercury in the Naples museum Reinach, *Rep. de la Sculpt. Grec. et Rom.* I, p. 568, pl. 925, No. 2351, also Bernoulli, *Röm. Ikon.*, II, 1, p. 172, No. 15; Nero as Mercury in the Glyptothek, Munich, Reinach, *op. cit.* I, p. 577, pl. 938, No. 2397, also Bernoulli, *op. cit.* II, 1, p. 399, and III, p. 57, etc., etc.

³ Cf. the Hermes of Praxiteles for a similar detail.

curls, the centre of each being indicated by a distinct circular boring. The flesh surfaces are smoothly worked but unpolished, while the face and neck seem rather more carefully finished than the rest of the body. The modelling is good but generally lacking in fluidity and warmth, and although quite correct it appears somewhat hard and academic. The modelling of the face, though

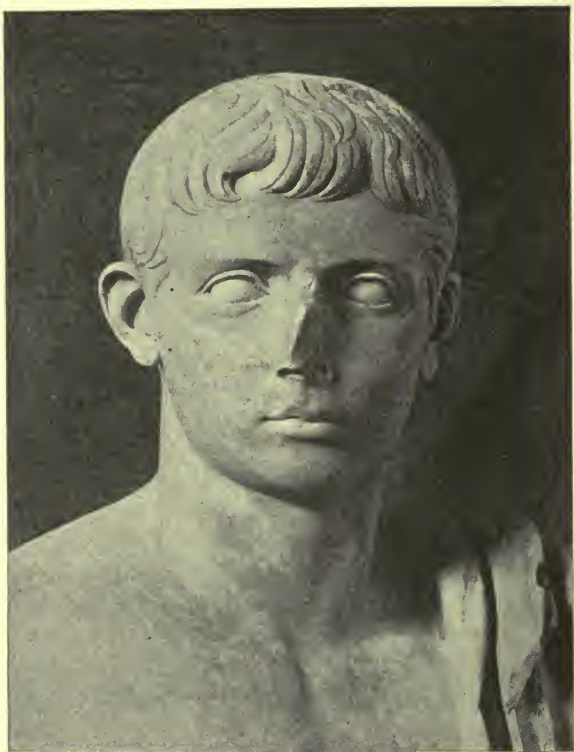


FIGURE 2.—GAIUS CAESAR: CORINTH.

generalized, possesses, nevertheless, a degree of subtlety which shows up effectively when viewed in the proper light; yet we must admit that the forms are rather cold and lacking in detail, a trait characteristic of the period to which the work clearly belongs. The Roman age is further revealed by the careless treatment of the feet, which are broad, flat, poorly modelled, and out of proportion. These imperfections, though scarcely pardonable, are to be explained by the fact that the statue almost certainly occu-

pied a position well above the eye of the spectator and was intended to be viewed only from the front.

The hair lies close to the scalp after the Polyclitan fashion, and is divided all over its surface into flat waving tresses which seem as if drawn on it but never stand out separately in relief; the locks across the forehead are particularly stiff and careful in their arrangement and, as in the case of the Augustus and the Tiberius, seem to follow a fixed iconographic scheme. Upon the top and back of the head the hair is very summarily treated. The eyes are fairly wide, with gaze directed very slightly downward and well to the right (cf. Fig. 2); the upper lids overlap markedly at the outer corners, and both the upper and lower are rendered sharply and in high relief, which in the former amounts almost to undercutting. These details of the hair and eyes just mentioned derive undoubtedly from a bronze technique. The eyeballs, though set well back in their sockets, are rounded and fairly prominent, the latter characteristic being accentuated by their unusual whiteness (cf. Figs. 1 and 2) due to the protecting layer of paint with which they were once coated. The brows are slightly arched and marked by a distinct ridge dividing them from the forehead—again reminiscent of bronze. The frown between the eyes, together with the broad forehead and a certain level gaze, gives the face its strongest resemblance to the Augustan type.

Attention must finally be called to a remarkable point of technique which has until recently received but scant attention from writers on ancient sculpture. I refer to indications which tend to prove that mechanical "pointing devices" were used in the classic period,—a subject upon which the statue under discussion serves to throw a ray of light.¹ On the rear of the left arm, where the

¹ Cf. Gardner, *Handbook of Greek Sculpture* (edit. 1915), pp. 32-35, . . . "In fact we can see such *puntelli* upon several unfinished works of sculpture. But these mostly belong to Hellenistic or Roman times; and even on works of this later period they are not always to be seen, while on earlier monuments they seem to be almost, if not entirely, unknown. . . . In later times, when genius and inspiration were less frequent, and art was more a matter of academic study, we find that the use of finished clay models became as universal as it is at the present day, and that their form was transferred to the marble by the same mechanical process that is now in use. The *puntelli*, however, seem, from their comparatively limited number, to have been rather a help to the sculptor . . . than a purely mechanical means of producing a marble facsimile of the clay model." For a further discussion of this subject, with full references, cf. Daremberg et Saglio, *Dict. des Antiq. Gr. et Rom*, s.v. *sculptura*, V. *La confection de la statue.—La maquette*. The most interesting

finish is far from careful, occur two conical protuberances rather less than 1 cm. in height; each takes the form of a truncated cone with a dot or sharp dimple-like sinking in the exact centre of the truncated area, and both are situated on the outer curve of the arm at a point where they would have been largely concealed by the drapery. The larger, situated on the upper arm directly above the elbow, has a height of .01 m. and a maximum diameter of .015 m., while the other, situated on the forearm in the same horizontal plane with the first but about .06 m. in front of it, measures .007 m. in height and .01 m. across. There is no doubt in my mind that these protuberances are typical *puntelli* which, because of their inconspicuous position, were forgotten in the final working over of the statue when many others were finally removed. If such is indeed the case, the statue was taken directly from a model by means of a process more or less mechanical.

Considered as a whole, it is quite clear that our portrait statue is of the same school and period as the Corinthian Augustus, and like the latter is academic and generalized in treatment. It displays also that same Greek trait of idealization so clearly marked in the former work, while on the technical side it would seem to have been modelled after a bronze original, or at least have been done under the influence of a strong school of bronze workers.

The description of the Gaius Caesar just given will apply almost equally well to the Lucius, its companion piece in the group, due allowance being made, of course, for the more mutilated condition of the latter. The scale in each case is identical, the type similar, and the technique very like.¹ Of the Lucius the head, shoulders, and upper half of torso alone are preserved, the main break occurring above the navel and extending diagonally downward from right to left. The figure, like its companion, was doubtless cut from a single block of marble, although it is clear that the right arm, due probably to an accidental crack or break,

example of mechanical reproduction that has come down to us from antiquity is doubtless the marble athlete in the Uffizi (cf. Bloch, *Röm. Mitt.* VII, pp. 81 f.; Amelung, *Führer durch die Antiken in Florenz*, p. 21, No. 25; Furtwängler, *Meisterwerke*, pp. 393 f.), which is an almost exact replica of the famous bronze athlete from Ephesus (cf. Benndorf in *Forschungen in Ephesos*, I, pp. 181 f., particularly p. 194, "Es handelt sich also um eine mit dem mechanischen Punktiersystem erzeugte Copie.")

¹ The dimensions are: greatest height .95 m., length of neck, front, .085 m., length of face .175 m., width of face .18 m., height of forehead .04 m., length of nose, approximately .07 m., width of mouth .052 m.

was repaired or restored by means of a hook-clamp spanning the fracture across the lower part of the biceps (cf. PLATE XI and Fig. 3). It should be noted in this connection that there were found at about the same level as that from which came the bust itself and within the north aisle of the basilica a right hand and



FIGURE 3.—LUCIUS CAESAR: CORINTH.

wrist which fitted with an elbow and forearm discovered in the eastern portion of the building. Since these fragments are of Pentelic marble and of the same scale and technique as the portrait under discussion, it is practically certain that they belonged to it. Although the first finger and thumb are lacking, the hand is seen to be contracted as if to hold an attribute, probably a *caduceus*, its presence being vouched for here also, as in the case of the

Gaius, by a small hole drilled in the palm opposite the tips of the third and fourth fingers. The face unfortunately is considerably battered, the nose being almost entirely lacking save for the bridge between the eyes; the upper lip is also abraded and flattened while the lower is considerably chipped; the same may be said of the brows near the bridge of the nose, as also of the lids to a certain extent; the front of the right cheek is somewhat scarred, almost the entire rim of the right ear is lacking, and that of the left, together with the cheek just before it, shows several ugly dents. The roll of the *chlamys* upon the left shoulder is badly battered, the front of the torso is worn and roughened in places, and the entire surface of the marble is mottled with ground and root stains. No traces of artificial coloring survive.

The material employed is the usual fine-grained Pentelic marble, in which a thin vein of silvery schist marks the diagonal break through the left arm just below the shoulder.

The original statue was doubtless of a "nude Hermes type" very similar to that of the Gaius, and judging from the heightened left shoulder and the play of muscles on the same side of the torso, one may safely conclude that the weight of the body was carried on the left leg. The head is turned slightly to the left, and the gaze though level and direct lacks the maturity and assurance observable in the expression of the Gaius; in spite of mutilations the Augustan frown is to be seen between the eyes. It seems to me that the bust had in all probability not been exposed to the weather prior to its overthrow. The rather summary workmanship of the back surfaces at least proves the figure so stood that the rear was concealed from view.

The technique shows no notable departure from that of the Gaius. Although the characteristic drilling is observable in corresponding positions, the flesh surfaces, perhaps, seem rougher and less carefully done, and no especial care is lavished on the face. On the whole the modelling is the same, although even more generalized and lacking in detail. The hair is treated in the same close-fitting Polyclitan style but with much less care and definition, although here again the arrangement of the locks across the forehead seems to follow an iconographic scheme. The entire top and back of the head, however, is simply blocked out in the rough. The eyes are less widely opened than are those of the Gaius, while the gaze is directed slightly downward and to the left; a considerable difference is also apparent in the rendering of

the eyeballs which here show a distinctly impressionistic treatment, particularly in that their surface is flattened and less sharply differentiated from the surrounding lids. The latter show no undercutting. These variations of technique, though slight in themselves and, perhaps, to be attributed to mere carelessness on the part of the sculptor, seem to me, nevertheless, significant. A careful comparison of the two portraits will show, for instance, that the impression of greater youthfulness imparted by the Lucius is directly traceable to the expression of the eyes, and this in turn is due to the impressionistic treatment of the eyeballs. Other and less obvious indications also tend to prove that in this portrait the sculptor sought to represent a youth of less mature years; for example, the face is shorter, more rounded and less massive, the forehead is lower, the mouth less wide and firm. In brief, the task imposed upon the sculptor of this statue was that of representing a youth several years the junior of the Gaius, and this he has accomplished by perfectly definite means. There can be no doubt that the lads are brothers and that the more mutilated portrait figures the younger of the two.

Since it would interrupt the logical continuity of my subject to take up at this point the problem of the positions occupied by these two portraits in the great group to which they certainly belonged, I wish here merely to call attention to a few significant details bearing on this question. Upon comparison it is evident that, despite their striking similarity in most respects, they show a subtle variation in pose and rhythm which is exactly that which might be expected had they been designed to balance each other on either side of a central figure or figures. For example, although the arrangement of drapery is similar in each, the weight of the body rests on the right leg in the case of the Gaius, but on the left in the Lucius; the former turns his head and gaze to the right, while the latter looks to the left. Thus, although the position of the arms was probably identical in each, that delicate symmetry and rhythm in grouping was obtained which was so generally demanded by the fine artistic sense of antiquity.

The foregoing paragraph is intended as a mere suggestion in passing. I shall return to this point in my discussion of the reconstitution of the group as a whole.

By way of introduction to the iconography of the two portraits before us a brief résumé of the personal history of Gaius and Lucius may not be amiss.

Sons of Agrippa and of Julia, the daughter of Augustus, Gaius was born in 20 B.C. and Lucius three years later.¹ Upon the birth of the latter both were adopted by Augustus² who conferred upon them the name "Caesar," and later overwhelmed them with honors before they were legally of age to receive them.³ Spoiled by the early distinctions which they had received, the youths became haughty and overbearing⁴ even to the extent of opposing Augustus himself; in this, however, they kept within bounds and gave him no occasion for withdrawing his favor.⁵ From regard for Augustus the Roman people in 5 B.C. chose Gaius *consul designatus*.⁶ Augustus himself created Gaius pontifex and Lucius chief of the college of augurs,⁷ and had them consecrate a temple and preside at certain games.⁸

Gaius saw his first military service in Germany under Tiberius, and in his eighteenth year he was sent to the East under the title of Proconsul of Asia.⁹ Here, with the assistance of mature and able advisors, he conducted successful campaigns against the Nabataeans, Parthians, and Armenians.¹⁰ He was named consul in 1 A.D., marched once more into Armenia, and conquered a large part of the country.¹¹ There he was surprised during a parley with the enemy and received a wound from which he never entirely recovered. Enfeebled in body and spirit he determined to

¹ Cf. Dio, LIV, 18.

² Cf. Suet. *Augustus*, 64.

³ Cf. Tacitus, I, 3, and Dio, LIV, 10, 1.

⁴ Cf. Dio, LV, 9.

⁵ Among other honors, Augustus erected a porticus and a basilica in their name (cf. Suet. *Aug.* 29). The porticus was one of the more important monuments built by Augustus during the latter part of his reign (cf. Van Deman, 'The Porticus of Gaius and Lucius,' *A.J.A.* 1913, pp. 14 f.).

⁶ Cf. Suet. *Aug.* 64; *Mon. Ancyr.* III, 1 f.

⁷ Cf. Dio, *Fragm.*, Morelli's edit. of 1800, p. 6.

⁸ Cf. Suet. *Aug.* 29; Ovid, *Fasti*, V, 551 f.; Dio, LIV, 26, and LV, 8. According to Beaudouin, 'La Culte des Empereurs dans les Cités de la Gaule Narbonaise,' article in *Annales de l'enseignement supérieur de Grenoble*, III, p. 69 (Grenoble, 1891), the famous temple at Nemausus, known as the "Maison Carrée," was built in their honor before they died. In *C. R. Acad. Insc.* 1919, pp. 332-340, is a discussion of the traces of the inscription on the Maison Carrée, in which it is argued that the temple was built by Agrippa between 20 and 12 B.C., and dedicated to Gaius and Lucius between 1 and 5 A.D.

⁹ Cf. Ovid, *De Arte Amandi*, I, 177.

¹⁰ Cf. Velleius Paterculus, II, 101-102; Dio, LV, 11; Suetonius, *Tiberius*, 12; *Augustus*, 94.

¹¹ Cf. Zonarus, p. 539.

live in private in Syria, but at the urgent request of Augustus he abandoned his command and started homeward. He got no farther than Lycia, however, where he died in 4 A.D. at the age of twenty-three.

His body was brought to Rome together with that of his brother Lucius who, at the age of eighteen, had died at Massilia one and a half years before while on his way to take command of the Roman troops in Spain.¹ In honor of their young patron Lucius the people of the colony of Pisa erected to him a sumptuous cenotaph and established a yearly festival which was later dedicated to Gaius also.² At Cos games were established in his honor, as well as a regular cult with attendant priests.³ These two prompt deaths which opened to Tiberius the succession to the throne gave rise to the suspicion that their author was none other than Livia, the mother of Tiberius.⁴

In attacking a problem of iconography such as that now before us the first step is necessarily an investigation of the numismatic sources, which ordinarily may be expected to lay the foundation for the attribution. In the case of Gaius and Lucius, however, the portraits which have come down to us on coins are comparatively few in number and of mediocre iconographic value; the two heads are for the most part represented in small scale facing each other on the same side of the coin, often combined with the head of Julia as well. With the exception of a few notable coins of Gaius, all the pieces bearing portraits of the young princes were struck outside Rome, and this in turn may further account for the inferior rendition of the features.

Thanks to the kindness of Mr. G. F. Hill of the Department of Coins and Medals of the British Museum, I am enabled to publish the more important coins of Gaius and Lucius Caesar, here for the first time gathered together (Fig. 4). Of the coins figured the two most important are without doubt the *aureus* and its corresponding *denarius* (Fig. 4, A and B), the only coins of Gaius

¹ His funeral was celebrated with great magnificence, and altars, temples, and statues were erected in his honor (cf. Gardthausen, *Augustus und seine Zeit*, II, 3, p. 1127). He received divine honors in Mitylene, and in Pergamum together with Gaius; Acerrae erected a temple to both as heroes (cf. H. Heine, 'Zur Begründung des röm. Kaiserkultes,' *Klio*, XI, 1911, p. 177).

² Cf. Norris, 'Cenotaphia Pisana,' in *Graev. Thes.* VIII, 3.

³ Cf. H. Heine, *loc. cit.*

⁴ Cf. Dió, *Frag.* VIII; Tacitus, I, 3; Pliny, VII, 145.

which are known to have been struck in Rome.¹ Although these have usually been dated 17 B.C., Mr. Hill² shows that they should rather be assigned to 5 B.C., the date of Gaius' *deductio in forum*; since this later date is now generally accepted, the iconographic



FIGURE 4.—PORTRAITS OF GAIUS AND LUCIUS CAESAR ON COINS.

value of the portraits is thus immensely increased. The heads on both coins are practically identical, of noble form and ideal cast of

¹ For the *aureus*, A, cf. G. F. Hill, *Historical Roman Coins*, pp. 165–168; Brit. Mus. Cat., *Roman Republican*, II, p. 42, No. 4468; Cohen, *Méd. Imp. Romaines*, I, p. 113, No. 1, pl. V. For the *denarius*, B, cf. Hill, *loc. cit.*; Brit. Mus. Cat., *Roman Republican*, II, p. 42, No. 4469; Cohen, *op. cit.* I, p. 113, No. 2, pl. V.

² *Historical Roman Coins*, *loc. cit.*

countenance reminiscent of a Greek athletic type which, while clearly Polyclitan, is yet somewhat influenced by the Olympia pediments;¹ in addition they show plainly the influence of the Augustan type of features, and upon comparison with a profile view of the portrait at Corinth (Fig. 5) they manifest a general resemblance which can scarcely be fortuitous. The silver *denarius* (Fig. 4 c), with heads of Gaius, Julia and Lucius on the reverse was struck at Rome probably between 17 and 13 B.C.² It is hence almost too early to be of iconographic value, quite aside from the fact that the scale of the portraits is such as to render them practically worthless in this respect. The three bronze coins of Clazomenae, Corinth, and Pergamum respectively (Fig. 4, Nos. 1, 2, and 3) upon which appear busts of Gaius and Lucius face to face offer little information bearing upon our subject, save only, perhaps, that a certain "family resemblance" may be expected between the portraits of the youths wherever found.³ Of the remaining coins figured, the four bronzes of Thessalonica, Pergamum, Tralles, and Aphrodisias (Fig. 4, Nos. 5, 6, 7, and 8 respectively) show each the head of Gaius facing to the right;⁴ due to the larger scale of these portraits we are justified in drawing certain conclusions as to the type of face which they present. It is apparent, I think, that a marked similarity exists between Nos. 5, 7, and 8; in each the forehead is rather low, the nose large and straight, the mouth firm with a slight droop at the corners, while the chin, though rounded and well marked, is comparatively small and receding; moreover the eye is large and wide, and looks forth boldly from beneath a slightly frowning brow. That such clear resemblances are observable in portraits from cities so widely separated as Tralles and Thessalonica is sufficient proof that the type represented was both well established and widespread; furthermore, as a type prevalent in the East, it might logically be expected to appear at Corinth. A comparison of the

¹ Cf. a bronze head in the Glyptothek, Munich, published in *Arch. Zeit.* 1883, taf. 14, 3.

² Cf. Cohen, *op. cit.*, I, p. 116, No. 1; also Brit. Mus. Cat., *Roman Republican*, II, p. 95, No. 4649.

³ For these coins cf.: 1. Brit. Mus. Cat. *Ionia*, p. 31, No. 120; 2. Brit. Mus. Cat. *Corinth*, p. 62, No. 508, pl. XV, 15; 3. Brit. Mus. Cat. *Mysia*, p. 140, No. 250, a coin of Tiberius.

⁴ For these coins cf.: 5. Brit. Mus. Cat. *Macedon*, p. 116, No. 73, a coin of Augustus; 6. Brit. Mus. Cat. *Mysia*, p. 139, No. 246; 7. Brit. Mus. Cat. *Lydia*, p. 344, No. 117, pl. XXXVI, 1; 8. Brit. Mus. Cat. *Caria*, p. 40, No. 98.

coins in question with the portrait at Corinth (cf. particularly Figs. 5 and 1) indicates that such was, indeed, the case; we see in the latter the same rather low forehead, the large eyes beneath a slightly frowning brow, the large nose, the firm mouth, and the same rounded chin, small, and lacking in prominence. The



FIGURE 5.—PROFILE OF GAIUS CAESAR: CORINTH.

Pergamene coin, No. 6, presents a rather different type, more ideal, and decidedly Greek in feeling; nevertheless, here also a certain resemblance appears in the line of the forehead, nose, and mouth. The remaining coins, Nos. 4 and 9, with portraits of Lucius Caesar are worthless for iconographic purposes.¹ Never-

¹ For these coins cf.: 4. Bronze, Pergamum, the reverse of No. 6; 9. Bronze, Tralles, cf. Brit. Mus. Cat. *Lydia*, p. 345, No. 123, pl. XXXVI, 3.

theless, comparison of the former with its obverse, No. 6, shows again a striking "family resemblance" between the portraits of the two youths, in this case, however, distinctly stylistic; the influence of the Augustan type is also quite apparent.

So far, then, as concerns the numismatic evidence adduced, we must admit that of itself it is inconclusive; yet we are justified, it seems to me, in basing upon it the following assumptions. First, that portraits of Gaius and Lucius, where found together, will show a marked resemblance one to another. Second, that they will be more or less strongly influenced by the well-known Augustan type. Third, that, in the case of Gaius at least, there existed in the East a widespread and clearly individual type, the salient characteristics of which are easily discernible; and further, that the influence of this type is quite apparent in the portrait at Corinth.

Turning now from numismatic criteria let us consider the remaining evidence for the attribution. This, though less direct, is far more conclusive.

Gaius at the time of his death was twenty-three, and Lucius died at the age of eighteen. With these ages the two portraits at Corinth seem to agree exactly. The figure of Gaius is, as shown above, clearly the elder by several years, and yet the face in spite of its comparative maturity can scarcely be that of a man of more than twenty-three.¹ Further, arguing from the presumptive resemblance of the princes to other members of their immediate family whose features are well known to us—a resemblance clearly indicated even in the coins—we find that in this instance also the case for the Corinthian portraits is remarkably strong. Turning first to their father Agrippa, we discern at once a distinct similarity between his portraits and those of the youths at Corinth,—a similarity not merely assumed to have existed, but vouched for by Macrobius.² Compare, for example, our Figures 1 and 3 with the bust of Agrippa in the Louvre;³ in all three the cheeks and lower part of the face are extremely alike, although the chin of Agrippa is stronger and more prominent. The most striking

¹ That these portraits probably do not represent the young Caesars as of a period *prior to their death* will be demonstrated hereafter in my discussion of the date of these works.

² Macrobius, *Sat.* II, 5,—*Idem* (Augustus) *cum ad nepotum turbam similitudinemque respexerat, qua representabatur Agrippa, dubitare de pudicitia filiae erubescibat.*

³ Cf. A. Hekler, *Greek and Roman Portraits*, pl. 174.

likeness, however, is that observable in the mouth, lips, and cheek of the Gaius (Fig. 1). The close affinity shown by the Corinthian portraits to the Augustan type is so palpably self-evident and has been so frequently mentioned in the foregoing pages that I must crave the reader's indulgence for reverting to it again at this point; I wish, however, by the citation of specific analogies to remove any possible ground for doubt. It is to be noted particularly in the following comparison that the most striking resemblances reside in the upper half of the face,—in the brows, eyes, forehead, shape of the skull, and even in the general arrangement of the hair across the forehead to a truly remarkable degree;¹ further, the resemblances, though found equally in each of the Corinthian portraits, are in general more convincing and more easily discernible in the Gaius than in the Lucius, due, of course, to the better preservation of the former. Compare, then, PLATE XI and Figure 2 with a head of Augustus in the Boston Museum,² Figure 2 with the head of the Augustus of Prima Porta,³ Figure 3 with the head of a portrait in the Museo Nazionale,⁴ PLATE XI with a colossal head in the Vatican,⁵ Figure 1 with a toga-clad portrait in the Villa Borghese,⁶ and PLATE XI and Figure 2 with the bust of a statue in the Vatican.⁷ Since many another and equally convincing analogy might be drawn, it is only necessary in concluding this topic to call attention to the self-evident relationship between Gaius and Lucius and the portrait of Augustus at Corinth.⁸

Before passing on to a general consideration of the varied and heterogeneous collection of ancient portraits upon which attempts have been made at different times to foist the names of Gaius or Lucius Caesar, it is well to summarize briefly the results already obtained. In the first place, then, the argument from probabil-

¹ Cf. Strong, *Roman Sculpture*, p. 356,—“The beautiful curved mouth of Augustus, and the fine abundant hair, combed somewhat boyishly over the forehead, *where it separates into three distinct strands*, are characteristics which reappear more or less markedly in other members of the Julio-Claudian family.”

² Cf. Hekler, *op. cit.* pl. 167.

³ Hekler, *op. cit.* pl. 171.

⁴ Hekler, *op. cit.* pl. 173, left.

⁵ Hekler, *op. cit.* pl. 169, a.

⁶ Hekler, *op. cit.* pl. 165, b.

⁷ Bernoulli, *Röm. Ikon*, II, 1, taf. III, left.

⁸ Cf. Pl. XI and Fig. 1 with pl. VI in the article on Augustus, *A.J.A.* XXV, 1921.

ity, in its cumulative effect, is well-nigh conclusive. We have here the portraits of two youths who were clearly brothers; the portraits are companion pieces, of identical type, style, size, and technique; they were found within the limits of the same Roman building at nearly equal depths and were certainly set up together at one and the same time; one of the youths, represented as in the early twenties, is clearly several years older than the other. These facts of themselves would be amply sufficient to suggest in the strongest possible manner the attribution already made,¹—but when in addition we note also that the features of each portrait show not only the most unmistakable similarity to those of Augustus but also a clear resemblance to those of Agrippa as well,—that with these portraits were found others, of Augustus himself and Tiberius, works of the same style, material, and technique, and all most assuredly belonging to a single great imperial group, the conclusion that the two portraits can only represent Gaius and Lucius Caesar is inevitable. It is further confirmed in striking manner by the numismatic evidence. We may, therefore, accept the attribution suggested, proceeding thence to note any confirmatory evidence discernible in other portraits supposed to represent these princes.

Of the so-called portraits of Gaius and Lucius listed by Bernoulli,² few are accessible to students in adequate reproductions, photographic or otherwise, and fewer still are of any iconographic significance, due to the fact that the identification in almost all cases is based on very slight evidence; a fancied resemblance to Augustus, stylistic conformity to the portrait type of the early empire, mere youthfulness and loftiness of mien, have often in themselves been considered sufficient ground for fixing upon a youthful male portrait the name of Gaius or Lucius. Of the six or eight pairs of portraits mentioned by the German scholar one only—the two busts of children in the Museo Chiaramonti³—is known to me, and this has since been shown to belong to a considerably later period.⁴ I can say little more of the single portraits. The head of a youth, called Gaius, No. 365, in the Museo

¹ Cf. Bernoulli, *op. cit.* II, 1, p. 133.

² *Op. cit.* II, 1, pp. 133–137.

³ Cf. Amelung, *Sculp. des Vat. Mus.*, I, taf. 61, Nos. 417, 419.

⁴ Strong, *Rom. Sculp.* p. 367, and pl. CXVII,—“The two busts, . . . 417 and 419, so long misnamed Gaius and Lucius Caesar, belong to the Flavio-Trajanic period.”

Chiaramonti,¹ shows no resemblance whatever to the portrait at Corinth and is probably somewhat later, if one may judge from the treatment of the hair. The gems are equally unsatisfactory. The two in the Cabinet des Médailles at Paris² do not, in the first place, portray brothers, nor do they further show any similarity to the portraits at Corinth.

To Bernoulli's list, however, I would add the following works, several of which are more important:

1. Relief on the so-called "altar of the Lares" in the Uffizi Gallery, dated 2 A.D.³ Augustus occupies the centre of a group of three persons, with Livia on his right and on his left a young man, who is, perhaps, to be identified with one or the other of the two princes, more probably Lucius, inasmuch as Gaius was at this time in the East. Comparison of this portrait with the two at Corinth (particularly Figs. 1, 3 and 5) reveals a striking resemblance in type of face,—a similarity which extends even to details, as, for example, in the eyes, mouth and chin. Indeed, the "family likeness" here discernible is not to be denied, and we can only regret that the scale of the photograph of the Florentine relief is such as to preclude the possibility of determining to which of the Corinthian portraits it is more nearly akin.

2. Portrait head of Lucius in the Worcester Art Museum.⁴ According to the *Bulletin*, this head is a companion piece to another in the Metropolitan Museum wrongly identified as a likeness of Tiberius in his youth; both heads are executed in the same kind of marble and were found at the same time and in the same place; further, the unmistakable resemblance between the personages proclaims them members of one family. The *Bulletin* continues: "From a study chiefly of portrait-coins and portrait-gems we believe it likely that these heads represent Caius Caesar and Lucius Caesar." Comparison of the portrait at Worcester with the works in Corinth is interesting; yet a sure

¹ Cf. Amelung, *op. cit.* I, taf. 58.

² Cf. Babelon, *Cat. des Camées Antiq.* Gaius, p. 114, No. 247, pl. XXV, Lucius, p. 114, No. 248, pl. XXV; Chabouillet, *Cat. Gen. des Camées*, Nos. 204, 205; Duruy, *Hist. des Rom.* III, cut p. 747.

³ Cf. Amelung, *Führer durch die Antiken in Florenz*, p. 73, No. 99; Strong, *op. cit.* p. 74; Photograph Alinari, No. 1163; Bernoulli, *op. cit.* II, 1, p. 45, No. 102; Dütschke, *Ant. Bildw. in Oberitalien*, III, p. 218; Michaelis in *Jb. Arch. I.* 1891, p. 229, No. 23, fig. 10.

⁴ Cf. *Bulletin of the Worcester Art Museum*, V, No. 3, October 1914, p. 12, plates on pp. 4 and 5.

identification of the former with either one of the latter seems scarcely possible. To be noted, however, is the similarity in the arrangement of the hair across the forehead exhibited by the two Lucii.¹ On the other hand, the mouth of the Worcester portrait with its delicate Augustan curve is more nearly approached by that of the Corinthian Gaius, although here, of course, allowance must be made for the more damaged condition of the face of the Lucius. On the whole it seems to me that there exists at least a probability that the person represented by the two portraits is the same.

3. Portrait head of Gaius, called "the young Tiberius," in the Metropolitan Museum.² Due to the obvious similarity between this head and the portrait at Worcester, the comparisons drawn above will apply here equally well, and the same ambiguity is apparent upon comparison with the portraits at Corinth. The general contour of the face, the forehead, brows, and chin resemble those of the Gaius rather than of the Lucius (cf. Figs. 2, 5 and 1), whereas the mouth is very like that of the Lucius (cf. pl. XI and Fig. 3); nevertheless I should not hesitate to identify this portrait with that of Gaius at Corinth provided only that the hair across the forehead were at all similar. Under the circumstances, therefore, I can offer nothing more than a "probable identification." That the bust in the Metropolitan Museum represents Tiberius seems to me highly improbable.

4. Bronze statue of Gaius in the Metropolitan Museum.³ Allowing for the difference in technique and effect of bronze and marble, and having taken into due account the youthful and immature forms of the bronze portrait, I think it quite probable that the latter represents the boy whom we see just grown to manhood in the Corinthian Gaius. A comparison of the two in profile discloses many points of resemblance,⁴ while in full face⁵ the greatest similarity exists in the tapering outline of the countenance, the shape of the chin and mouth, the broad low forehead, and the rounded dome of the skull; there is also a certain likeness in the brows and eyes. Here again the arrangement of the hair across

¹ Cf. our pl. XI, with the *Bulletin*, pl. on p. 4.

² Cf. *B. Met. Mus.* IX, No. 3, March 1914 pp. 60-61, figs. 2 and 3; also Miss Richter, *Handbook of the Classical Collection*, p. 248, No. 55, fig. 151.

³ Cf. Miss Richter, in *A.J.A.* XIX, 1915, pp. 121-128, pls. I-VI; also in the *Handbook of the Classical Collection*, p. 246 f., No. 57, fig. 150.

⁴ Cf. *op. cit.* pls. V and III, with our Fig. 5.

⁵ Cf. *op. cit.* pl. VI, with our Fig. 2.

the forehead gives strong confirmation to the identification proposed. Miss Richter, in discussing the bronze in the Metropolitan Museum,¹ concludes that it is a Greek work done probably in the eastern half of the Roman Empire, and observes most aptly its importance in that it shows that at this comparatively late date there were still Greek artists, in no sense mere copyists, who were thoroughly imbued with the idealizing tendencies of the earlier Greek sculpture. This same observation holds true even more strikingly of the Corinthian portrait, since in the latter the course of this idealization lies in the direction of the classic Greek athletic canon rather than in that of the semi-orientalized Hellenistic tradition.

5. Portrait head, marble, in the Capitoline Museum, formerly called Caligula,² but identified by Studniczka as Gaius because of its resemblance to Agrippa.³ The cut of this portrait given in the *Archäologischer Anzeiger* is on too small a scale to admit of fruitful comparison with the Corinthian portrait; it seems, however, to be of a rather different type, although showing manifest resemblances, *e.g.*, in the shape of head and face, and in the brows and mouth. The arrangement of the hair across the forehead is quite different.

6-9. With the head in the Capitoline Studniczka links four other so-called portraits of Caligula, to wit,—a head of green basalt in the same museum,⁴ a head in the Uffizi,⁵ a mail-clad portrait statue in the Naples Museum,⁶ and a marble head in the Villa Albani,⁷ and identifies each as a portrait of Gaius.

10. Marble portrait head of some young member of the Julio-Claudian family, found in Sussex.⁸ This can scarcely represent Gaius or Lucius.

11. Cameo in Berlin bearing a portrait of a young man of pronounced Augustan type, yet clearly not Augustus.⁹ Furtwängler, comparing it with the *aureus* of Gaius (Fig. 4 A), concludes that

¹ Cf. *op. cit.* p. 123.

² Cf. Bernoulli, *op. cit.* II, 1, p. 305, No. 2.

³ *Arch. Anz.*, 1910, col. 532 f., figs. 1 and 2.

⁴ Cf. Bernoulli, *op. cit.* II, 1, p. 304, No. 1.

⁵ Cf. Bernoulli, *op. cit.* II, 1, p. 306, No. 11.

⁶ Cf. Bernoulli, *op. cit.* II, 1, p. 306, No. 9.

⁷ Cf. Bernoulli, *op. cit.* II, 1, p. 305, No. 5.

⁸ Cf. Haverfield, *Arch. Anz.* 1911, cols. 306-308, fig. 12.

⁹ Cf. Furtwängler, *Antike Gemmen*, I, taf. XLVII, No. 51,—II, p. 227, No.

it is a portrait of the latter,—a conclusion borne out by its evident resemblance to the Gaius at Corinth.¹

From the foregoing it is clear that but slight confirmatory evidence for the identification of the Corinthian portraits is to be derived from a study of other supposed likenesses; indeed, the identification of each and all of the latter is based upon grounds so infinitely more hypothetical than is that of the marbles at Corinth that the evidence of iconographic resemblance ought clearly to be adduced in the opposite sense. Nevertheless, a strong mutual confirmation is, perhaps, to be admitted in the case of the Corinthian portraits and the relief in the Uffizi, and in that of the former and the bronze in New York, as well as the cameo in Berlin. Further, if the pair of marble busts in Madrid so highly praised by Bernoulli² were available in adequate reproductions for comparison with the portraits at Corinth, I feel sure that the mutual confirmation would be even more striking.

To anyone, therefore, who, with unprejudiced mind, has followed thus far the course of my argument for the identification of the Corinthian portraits, it must seem that the case in favor of the proposed attribution is complete. There can be no doubt that these portraits represent Gaius and Lucius Caesar.

Before passing on to a consideration of the remaining works of the Corinthian group a few words must be said as to the probable date of these portraits,—a question which logically arises at this point. In the first place, then, is there any known historical fact which would account for Gaius and Lucius having been thus honored at Corinth?

As to the number of statues and busts erected to the honor of these princes throughout the empire, there is every reason to believe that it was considerable. As the adopted sons of Augustus and the clearly designated successors to the throne, their rank was second only to that of Augustus himself, and when the latter, as it were, set the fashion by the early bestowal of numerous and extraordinary honors, cities, colonies, and individuals were not slow to follow. This, as might be expected, was particularly true of the eastern half of the empire, a fact clearly demonstrated by the number of coins struck with their portraits throughout the East.³ Furthermore the extraordinary power with which the

¹ Compare Fig. 5, with the gem cited.

² *Op. cit.* II, 1, p. 134.

³ *Vid. supra.*

youthful Gaius was clothed as Proconsul of Asia must surely have furnished occasion in that whole region for the erection of numerous monuments in his honor; this may be assumed the more particularly since to Lucius there was set up a statue in Nicomedia although he had never visited Asia and was at the time but fourteen years of age.¹ The example of Nicomedia was doubtless followed in other cities of the Orient, yet the portraits of Gaius must always have been greatly in the majority.

As to Greece itself there is every reason to suppose that here also the princes were signally honored. Indeed, statues of Gaius and Lucius in Athens are known to us through inscriptions; the former was represented in the guise of the youthful Ares,² while a statue of the latter was placed above the gateway of the Roman Agora.³ Since Corinth was at this period of greater importance than Athens, at any rate commercially, and since, moreover, it represented the chief station on the direct route from Rome to the East, it is certain that Gaius sojourned there for a time while on his way to take command in Asia. He was, therefore, well known to the Corinthians and doubtless well liked. Hence his portrait was sure to have been included in the great imperial group, the erection of which was projected if not already under way at this very time.⁴ Further than the very general considerations just mentioned I am aware of no definite historical references which might either account for the appearance of these portraits at Corinth or serve to date them accurately. I think, however, that certain valid conclusions in this sense are to be drawn from the sculptures themselves.

We have already seen that there is good reason to believe the portrait of Augustus at Corinth was set up not long before 2 A.D., while that of Tiberius was, perhaps, erected shortly after the death

¹ Cf. Perrot, *Explor. Arch. de la Galatie et Bithynie*, I, p. 4.

² Cf. *C.I.G.* I, 311.

³ Cf. *C.I.G.* I, 312; also Frazer, *Pausanias's Description of Greece*, II, p. 186,—“Above the pediment or gable there was formerly a pedestal which, according to the inscription *C.I.A.* III, 445, supported a statue of Lucius Caesar.”

⁴ I wish to call attention to the fact that here also we have a striking confirmation of the distinction involved in the bestowal of the name Gaius upon the more complete and carefully worked of the two youthful portraits; *i.e.*, since Gaius was known personally to the Corinthians, a more accurate and more finely finished portrait would naturally be demanded by them than would be deemed necessary in the case of Lucius. Moreover the sculptor, who was most certainly a Corinthian, had in all probability himself seen Gaius.

of Gaius in 4 A.D.¹ Since the portraits of Gaius and Lucius belong to this same group they must, therefore, have been erected at about the same time. On grounds of probability, however, I think it unlikely that either of the princes would have been honored at Corinth before the visit of Gaius, whereas thereafter the probability would have been greatly increased, and further, that directly after the death of Gaius this would hold true to a much greater degree. We know that the body of Gaius was conveyed with great pomp to Rome from Asia Minor, and here again the route must certainly have lain through Corinth. What more natural, therefore, than that, in addition to the temporary manifestations of grief and respect, the Corinthians should at this time have decreed the setting up of a memorial in the form of a portrait statue,—not only of Gaius whom they knew and truly mourned, but also of Lucius who had died but a short two years before? That such was, indeed, the case is impressively confirmed by the very manner in which the youths are represented. For while the Augustus and Tiberius of Corinth appear in the dress of everyday life, engaged apparently in a common religious rite, the two youths stand forth in heroic nudity, in the guise and posture conventionally assigned to Hermes. At this early period of the empire they would, I believe, scarcely have been so represented during their lifetime; at any rate I am aware of no contemporary nude statue of Augustus for example—or of any other member of the imperial family—which can be shown to have been set up before the death of the person represented.² Furthermore it is scarcely probable that statues would have been erected to either Gaius or Lucius after the death of Augustus in 14 A.D.; in fact I think that honors of this sort would have ceased within a comparatively short time following the death of the princes, and most probably after the due period of mourning, when Tiberius had been clearly designated as the successor to the throne. A dead prince is soon forgotten,—and all the more quickly when his follower in the succession is known to have been his enemy.

¹ Cf. the articles on Augustus and Tiberius in the preceeding numbers of the *A.J.A.*, pp. 142 ff. and 248 ff.

² But it must be admitted that in Athens and elsewhere the young princes would seem to have received at least semi-divine honors before their death; cf. for example an inscription in Athens, *C.I.A.*, III, p. 496, 444a, in which Gaius is called the "son of Ares," "Ἀρης υἱόν." This inscription was not dedicated after the death of Gaius, but very shortly before, probably in 3 or 4 A.D.

From the foregoing considerations, therefore, it seems to me that the portraits of Gaius and Lucius at Corinth are to be dated within a comparatively short period immediately following the death of Gaius in 4 A.D. If, however, such exactitude be objected to on the ground of insufficient evidence, it will be readily admitted that the portraits must at least fall between the years 1 and 14 A.D.

In conclusion I must draw the reader's attention to several very interesting points of style discernible in these two works,—more particularly, of course, in the Gaius. It is quite apparent that in this statue we are to recognize an expression of the eclectic neo-Attic school, the working of which was so evident in the Corinthian Augustus;¹ we note the same athletic build and length of leg, the small head, and the rather schematic treatment of the folds of the remarkably well-moulded *chlamys* depending from the left arm. As to this drapery, I must note in passing that in my estimation its folds manifest most clearly the influence of clay modelling upon the marble technique, particularly in the rendering of the crumpled surface texture,—and herein is perhaps to be recognized a confirmation of the inference already drawn from the presence of *puntelli* on the left arm (cf. *supra*, pp. 343 f.), i.e., that the statue was taken from a clay or plaster model with the assistance of some mechanical "pointing device."

Although the figure is rendered in a general style distinctly neo-Attic, it nevertheless shows certain variations from that norm which seem to me suggestive and well worthy of closer examination. It will be noted for example that the torso is heavier, more powerful, and of greater muscular development in proportion to the length of leg than is usual in neo-Attic work; the muscles stand out more clearly, are of firmer texture, more strongly modelled; the shoulders, though of great width, are sloping and heavy, and quite lacking in that square and slender angularity so characteristic of the school.² Moreover the groin-line, with the heavy roll of muscle just above the hip, is treated in totally different fashion, its curve more rounded and breaking sharply with the horizontal sinking at the hips, while the arms are proportionally shorter and more powerful. And, further, the figure as a whole possesses a certain sturdy, straightforward frankness of expression

¹ Cf. article on the Augustus, *A.J.A.* XXV, 1921, p. 154.

² Cf., for example, our Pl. X, with the male figure of the Orestes and Electra group in Naples.

far removed from the languid self-consciousness of the usual neo-Attic work.

The source of these peculiarly distinctive variations from the norm, variations which serve to set apart these Corinthian statues from any neo-Attic work hitherto known, is not far to seek and might indeed have been predicted from the very geographic position of the city of Corinth. To make clear the source, therefore, it is scarcely necessary to suggest the comparison of the Corinthian statue with the Doryphorus in the Naples Museum.¹ The resemblance is so striking that it requires little comment. Due allowance having been made for the static pose and advanced left leg of the Gaius, together with the greater slenderness of the legs themselves and the smaller scale of the head, it is quite plain that the Corinthian figure was directly inspired by the famous work of Polyclitus. That this should be the case is not surprising. Although Polyclitus was himself an Argive, the schools of Argos and Sicyon seem always to have been closely united, and it is now well known that their common centre was transferred to Sicyon as early as the fourth century B.C.; further, it is quite logical to suppose that, as long as the art of sculpture continued alive in Greece, Sicyon remained the centre from which radiated the influence of the Peloponnesian athletic sculptors in bronze. Taking into account these circumstances, therefore, and recollecting also that the walls of Sicyon stood within sight of the ramparts of Corinth, we can scarcely wonder at the remarkable variation from type to be seen in the Corinthian Gaius; it is exactly what we might have expected. Although neo-Attic and eclectic it is characterized by the preponderant influence of the old Peloponnesian athletic canon. Indeed, this influence is to be traced even in details. For example, the head, though small, is covered with the close-fitting hair of the Polyclitan type, which in its stiff and accurate locks betrays clearly the influence of the bronze technique. The latter is plainly indicated also by the pronounced abdominal line. But enough has already been said to demonstrate my point.

These statues at Corinth, then—the Gaius, Lucius, and Augustus—prove the existence of the neo-Attic school in Greece. They show also that, in Corinth at least, the slender Lysippean canon of the school was considerably modified under the influence of the heavy Peloponnesian athletic type of the fifth century.

¹ Cf. Brunn-Bruckmann, *Denkmäler*, taf. 273.

MOZARABIC ART IN ANDALUCIA

THE art of the Andalucian Mozarabs¹ seems to have received as yet little attention from students of the Mohammedan occupation of Spain, although much has been written about the Mozarabs of Toledo. I hope, therefore, that some observations on the beautiful sculptures and mural paintings of these mediaeval Spanish Christians may be of interest.

Eighteen years study of the subject has left me with the conviction that this art was not implanted by invaders from the East, whether Greek, Roman, or Arab, but is in its essence traditional to the soil, and handed down from so remote a period that it would be rash to attempt to date it, although of course influenced from generation to generation by the political changes which took place in Spain. One must go to country villages, lonely manors, and granges among the mountains remote from cities if one desires to form a just idea of the astonishing persistence of tradition among the native Andalucians, who are as different in many characteristics from the practical Basques or Catalans as from the *laissez-faire* aristocrats of proud Castile. In the fertile vegas and precipitous sierras of the Southwest the true Iberian race, as apart from the Celt-Iberian, survives with habits and customs in some respects hardly changed since before the time of Christ. They produce corn, oil, and white wine in certain districts as did their forefathers under Carthage or Rome or their own King Arganthonius² in the sixth century B.C.; and certain details of the advanced agricultural science of the ancient Tartessus have been handed down in such perfection that travellers conversant with *e.g.* olive culture elsewhere have told me no other system excels the traditional Andalucian, the origin of which is lost in the mists of antiquity.

The same must be said of the irrigation systems generally attributed to the Moslem influence in Spain. I have found no

¹ *Moçtereb* was a Christian who lived among the Arabs and was on friendly terms with them. Cf. *Diccionario de la Academia de la Lengua española*.

² Herodotus, I, 163 ff.

fewer than four examples of proto-historic, or Bronze Age, or megalithic hydraulic works, easily recognizable by the cutting and placing of the stones. Three of these conduits still convey drinking water from headlands miles away to towns the "Cyclopean" foundations of which I have seen in the course of excavations undertaken for scientific or other purposes. That these remarkable works were not inspired by Rome is proved by the glaring contrast of the Roman repairs with the rough-hewn stones employed in the parent conduits, most of which lie at least four meters below the present level of the soil. And we have the authority of Strabo¹ for the high civilization of the Turdetanians (the name given to the Tartessians after their conquest by Carthage in or about the fifth century B.C.) in his time.

As another instance of the survival of tradition we have the proto-historic method of construction commented on by Caesar, known to the Arabs as *tapia*, and in the present day as *terre pisée*. I am writing this essay in a modern house built of *tapia*, i.e. damp earth trodden between boards, and it is attached to a great fortress tower also built of *tapia*, with walls two meters thick and foundations of stones rough-cut in the Cyclopean style. This tower has Roman arches 7 meters high within, and Arabic horseshoe arches outside, of stone ingenuously and visibly dove-tailed into the Roman facing; and at the back of an Arabic arcature still more ingenuously introduced above the horseshoe arch on the existing façade. We have the original Iberian façade of earth stamped between boards and rubbed smooth on the surface by way of ornament. Where some of the Roman work has fallen away we see the holes where the proto-historic scaffold poles were fixed before Phoenicians or Carthaginians came to destroy, so far as in them lay, the proto-historic or Mediterranean civilization of Tartessus.

The tower is one of the five gate-towers of the ancient fortified city of Niebla, the Liblah of the Arab historians and the *Ilipla*² of the classics, and local tradition carries the history of this, the main gate, and the city back to the destruction of Tartessus at the hands of Carthage. Certain it is that the town existed when the Sun was the deity of Tartessus, for each one of these gates opens

¹ Strabo, III, 146 ff.

² Strabo, III, 141 ff., Polybius, XI, 20, Livy, XXXV, 1, and Pliny, *N.H.* III, 1, 3, read, apparently, *Ilipa*, not *Ilipla*. Pliny, *loc. cit.*, mentions another town, *Ilipula*. H. N. F.

at right angles to the great fortress wall—which still completely encircles the town—and has its outlet facing the rising sun.

These earthen walls, of which whole villages, including even edifices of some importance, are still constantly constructed, become extraordinarily hard in a short time under the burning Andalusian sun, while the proto-historic remains such as those of Niebla, and Seville also, are indestructible by any means short of dynamite. I had a skilled stonecutter at work a whole month opening a window in the wall of my tower, which when it came into my possession had no light and no ventilation. Both the great archways leading one into and the other out of the town had been built up by the peasant families who had lived in its shelter for hundreds of years, leaving only a small door to obtain access. In the middle of the wall we found, near the remains of some of the wooden pegs and a cord of esparto grass used to support the boards which confined the earth, a section of a very early flat-bottomed plate with a sun symbol traced on it in metallic lustre—material evidence of the height of civilization attained by the primitive inhabitants of Andalusia.

The construction of the fortress walls of Seville—now regarded as built over the remains of the lost city of Tharsis—is precisely similar to that of Niebla. These walls and the Alcazar, the palace of the rulers of Spain throughout history, are built of beaten earth on foundations of Cyclopean work five meters deep, and parts of the actual palace walls are no less than five meters thick. Behind the Renaissance façade of the garden front of the magnificent hall known as the Salon of the Emperor Charles V., because it was redecorated for his wedding, a stretch of the Arabic façade has been found, and behind this again General Távira, Governor of the Palace, has discovered quite recently the primitive stone front of the original building with Iberian signs, doubtless mason's marks, on several of the stones. Very little of the original building is now visible, for the walls naturally have been faced again and again in the course of so many centuries; but in the palace gardens may yet be seen the remains of a massive tower in its primitive condition, and in the beaten earth of which it is constructed bits of Stone Age pottery have been discovered. The true history of the Alcazar of Seville will only be written when the extensive investigations set on foot by King Alfonso and superintended with keen interest by General Távira reach the vast extent of subterranean chambers and galleries yet to be

opened up beneath the Arabic palace which was built by Motamid-ibn-Abbad in the eleventh century on what then remained of the five-meter thick outer walls overlooking the junction of the Guadalquivir and the Guadaira. Then we may hope to learn more about the proto-historic or Mediterranean civilization of the Iberian race, which has preserved, together with its irrigation systems, its methods of construction, and the details of its agricultural science, the tradition of its sacerdotal garments and the racial type of its women in a series of sculptures and paintings unique in Christian art.

Although the Southwest of Spain was cut off from the march of northern Romanic art down to the reconquest in the thirteenth century, it is a mistake to suppose that religious art here developed solely along Mohammedan lines. In *Arabic Spain* (Chapter I, 'Christianity under Islam') evidence of unimpeachable authority will be found that Andalucia always had a Christian art of her own, nurtured and developed by thousands of Andalucian Christians (Mozarabs) who lived here and practised their religion

right down to the coming of the Almohades, or Moors of Morocco, as distinct from the Arabs from the East, in the second half of the twelfth century. So powerful was the Christian element in all this region that the Christians were able to retain their own rite, their churches and their priests, until the reconquest in 1248, even the bishops having held their sees in many cases until close to that event. Curious relics of the ancient Isidorian or Hispalian (Mozarabic) rite persist to this day in the Cathedral services at Seville, to the bewilderment of Catholics from other countries.¹

¹ Cf. *Glorias Sevillanas*, by Don Manuel Serrano y Ortega.



FIGURE 1.—OUR LADY OF CARMEL:
SEVILLE.

To convince ourselves whence sprang the art of these Andalusian Christians, true to their faith through so many centuries of alien pressure, we need only compare the sculptured Virgin of Carmel (Fig. 1) with the "Lady of Elche" (Fig. 2). The general cast of the countenance, the peculiarly stately poise of the head, and the beautiful shape of the oval heavy-lidded eyes, proclaim the survival of a racial type.



FIGURE 2.—THE "LADY OF ELCHE"
RECONSTRUCTED BY DON JOSE PIZJOAN.

(By permission from the *Burlington Magazine*,
November, 1912.)

The alabaster image of Our Lady of Carmel was found, together with a church bell, in digging for the foundations of a new convent for the Carmelite nuns of Seville in 1414 or 1415.¹ On the secularization of this convent in the last century, the image was given into the charge of the Hieronymites of Buena Vista, on the bank of the Guadalquivir a mile out of the city, and when this monastery in its turn suffered the same fate, the exquisite statue was taken to the church of San Lorenzo, together with two sets of embroidered vestments of the fifteenth century. At San Lorenzo I had the good fortune to see it before it was placed on the altar where it now stands. Thus I was able to make a detailed study of

the dress (now, alas, hidden under heavy draperies of velvet and satin, according to the religious mode in Seville today), although I could not get the modern crowns and adjuncts removed.

¹ Zuñiga, *Anales de Sevilla*, Lib. X.

The classical costume with the *chlamys* is seen in the photograph, but not so the typical *casulla monastica*. This is of the form worn by the early Christians, which did not begin to vary, according to Sr. Gudioll y Cunill (*Nocions d'arqueologia sagrada catalana*) until the twelfth century. It is safe to say that racial tradition prevailed where so primitive a form of the vestment was represented. For my part, from internal evidence too long to give in detail here, I take this work of art to have been executed somewhere towards the third quarter of the eleventh century, when all the Mozarabic churches in Seville obtained support and were renovated, thanks to the influence of the Christian wife of King Motamid-ibn-Abbad, whose daughter married King Alfonso VI of Castile. In this image the chasuble consists of one piece only, and that is worn at the back. The hair, eyebrows, and eyes are painted, as are also the lips. This detail is seen in most, if not all, of the Mozarabic images of Andalusia.

A small alabaster image of the Virgin (Fig. 3) found at Niebla in the province of Huelva in 1912 has many of the same features as that of Carmel, not excepting the *casulla monastica*, but it has in addition an outline which is individual and of considerable interest. The strangely rotund shape of the body and the wide outflow of the skirt at the foot bear some resemblance to the well-known Hera of Samos in the Louvre. The shapelessness of the Niebla figure cannot be ascribed to ineptitude on the part of the artist, for the head has the same dignified poise and beautiful cast of features as the "Lady of Elche" and the Virgin of Carmel, while the floral decoration of the pedestal is highly artistic. Thus I take the rotund outline to be the survival of another racial tradition.

Tartessus (now Andalusia) was in close alliance with the Samians, as also the Phocaeans and Rhodians, in the seventh and sixth centuries B.C., temples to Hera, Artemis-Athene, and, later, Diana having been erected in many places in the region.¹ There are relics of a Graeco-Tartessian temple at Niebla, steps and the base of a column cut in the rock still existing outside the town walls, while the base of a Doric column 63 centimeters in diameter found within the town suggest that the temple was of importance.

The statue of an Iberian or Tartessian priestess in the Archaeological Museum of Madrid (Fig. 4), from which Sr. Pizjoan reconstructed the "Lady of Elche" from the waist down, has the

¹ Cf. Joaquín Costa, *Estudios Ibericos*, pp. 40 ff.

same peculiar outflow of the drapery at the foot. It may be that in the singular outline of the Niebla statuette we have a reminiscence not only of early Greek art as seen in the Samian Hera, but also of the frills and plaited flounces seen at the bottom of the skirt of many of the statuettes of Iberian priestesses.

The tradition of the *chlamys* also appears in the Niebla image, but half concealed by the wide, thick sleeves and disfigured by



FIGURE 3.—ALABASTER IMAGE OF THE VIRGIN: NIEBLA.¹

holes made to support the image of the Child, which unfortunately was not discovered with the Mother.

Another singularly interesting and suggestive survival of the proto-historic sacerdotal dress is seen in the Mozarabic mural

¹ Found at Niebla, in the Province of Huelva, in 1913 and preserved in the museum of the Anglo-Spanish School of Archaeology. This shows the *casulla monastica* as worn also by "Our Lady of Carmel." The eyes are wide apart; the mouth slightly open and smiling; the nose long and springing from between the eyebrows, as in the "Lady of Elche."

painting of Nuestra Señora de la Antigua ("Our Lady of the Old Time") (Fig. 5) in the Cathedral of Seville. The "Lady of Elche," as also several of the statuettes of priestesses in Madrid, wears a long and voluminous cloak which when opened out would form a complete circle. The Marques de Cerralbo, President of the Madrid Junta Superior de Excavaciones tells me that this Iberian or Tartessian cloak was the parent of the sacerdotal cope, the cloak worn by priests in the street, and the cape considered typical of the Spanish *caballero*. The Tartessian priestesses wear it drawn closely round the figure and falling in rich folds over the arm from the elbow to the hem of the skirt. Just such a cloak is worn by "Our Lady of the Old Time," draped over the arms and from thence downward over the skirt, in wide, stiff folds which seem modelled on those of the priestesses. The dress flows out over the feet in small curves or plaits, another suggestion of tradition.



FIGURE 4.—IBERIAN PRIESTESS:
MADRID.¹

¹ Found at El Cerro de los Santos, Province of Andalucía, now in the Archaeological Museum, Madrid. It shows the characteristic draping of the round cloak, with the spreading of the skirts over the feet.



FIGURE 5.—NUESTRA SEÑORA DE LA ANTIGUA: SEVILLE.¹

This remarkable mural painting existed in a chapel of the Cathedral which was served by faithful Mozarabic priests during the last years of the Almohade rule in Seville, and no one knows how long before. When Fernando III (Saint Fernando) conquered the city in 1248 these priests were dwelling in a cloister of the primitive basilica, which had never been rebuilt since it was founded, though the whole building, with the sole exception of the Chapel of "Our Lady of the Old Time," had been converted to Moslem uses at the end of the twelfth century. The cloister, which is entered by a remarkable archway of tenth century construction, still serves as the residence of canons and the celebrated Seises, whose famous dance dates at least from the reconquest and probably from long before that time. The thirteenth century *Cantigas* of Alfonso the Wise relate how Saint Fernando visited

¹ This is a mural painting in the chapel of its advocacy in the Cathedral of Seville. The image which is about eight feet high is referred to as "Nuestra Señora de la Antigua" in the *Cantigas* of Alfonso the Wise (thirteenth century) and

from the resemblance of the design of the robe to a Spanish-Arabic textile of that period in which cherubs holding a crown are depicted, it may be inferred that the already ancient painting was renovated according to the artistic taste of the time after the reconquest of Seville in 1248.

secretly this picture of Our Lady during the siege, as also how her refulgent beauty so dazzled the infidels who beheld it that not one could ever raise a hand to injure the picture. It remained in its original place, on the wall facing south in the ancient chapel of its advocacy, until 1578. The chapel had then been rebuilt and the painting was transferred with infinite care to the altar which it now adorns, amid the rejoicing of the city. Every year at daybreak on Easter morning a magnificent high mass is sung in the chapel in honor of "Our Lady of the Old Times," and is attended by the whole chapter in full canonicals, but as people are mostly asleep at that hour, few Sevillians or foreign visitors now share in this act of homage to the symbol of a faith which never wavered through five hundred years of alien occupation.

"Our Lady of the Old Time" was patroness of a very ancient order of chivalry which had as its device a jar of lilies or lotus flowers, the Spanish *azucena*, the Arabic *açuçena*, and the Egyptian *sechen-n-aten* (bunch of *aten* flowers). This order was known in the fifteenth century as that of the *Jarra* (vase). The heraldic arms of the order of Nuestra Señora de la Antigua are also those of the Cathedral of Seville, which is dedicated to Maria Santissima—"Our Lady Most Holy." And an ancient almost forgotten Andalusian tradition gives the vase of *azucenas* as the heraldic arms of the Blessed Virgin herself, on the ground that the woman who ate of the root of the water-lily would conceive without human intervention, a mystical idea which may have come to Spain



FIGURE 6.—OUR LADY OF ROCAMADOR:
SEVILLE.



FIGURE 7.—IBERIAN PRIESTESS:
MADRID.¹

from Egypt with the Coptic adherents of the Arabs in the eighth century.²

The period of the painting of "Our Lady of the Old Time" has been hotly disputed. Successive "restorations" have increased the difficulty of classifying it with any certainty from the technical point of view as the work of this or that century. We may, however, assume that the original image must have been painted previous to the Almo-hade invasion in 1146, when such persecution of the Christians as ever took place in Seville would have been at its height, since it was the object of worship and was regarded as miraculous when the Moors were driven out in 1248. It is certain that the chapel and its cult would not have been tolerated during that century had it not existed previously, while if a new presentment of the worshipped image had been painted after the reconquest the Christian chroniclers would not have failed to give it prominence.³

¹ In addition to the headdress similar to that of "Our Lady of the Corral," this figure shows the typical circular mantle and flounced skirt.

² Mr. Albert Van der Put, in the *Burlington Magazine* of August 1913 gives the portrait of a Knight of the *Jarra*, but does not explain that this was the principal Aragonese order of the fifteenth century. Variants of the vase of the Virgin (*la Jarra de la Virgen*) are repeated *ad infinitum* in Andalucian art in all its branches, and it pervades the whole Cathedral of Seville, especially in its unsurpassable ironwork, and its magnificent vestments which are comparable only to those of St. Peter's at Rome.

³ The traditional cloak with its heavy folds draped over the elbow is seen also

"Our Lady of Rocamador" (Fig. 6) is a mural painting of the same dimensions as "Our Lady of the Old Time" and also has the thirteenth century cherubs holding the crown, although they do not appear in the illustration. Its history resembles that of the image in the Cathedral: it was painted at a period unknown for a "Hermitage and Hospice of the poor" and appears to have been given the (then new) advocacy of Rocamador in or about 1252. The Hospice was then pulled down and the painting transferred to its present position on a wall under the Arabic minaret of the Church of San Lorenzo when that edifice, which had been used as a mosque, was reconverted to Christian uses. The records, however, are less clear than those of "Our Lady of the Old Time."

Another Mozarabic representation of the Virgin is the mural painting of "Our Lady of the Corral" in the Church of Saint Isidore in Seville. So far it has been impossible to obtain a photograph of this, for it is glazed and the light is extremely bad at all times. Here, again, we have the heavy-lidded almond eyes and the finely chiselled lips typical of the race as seen in these presentments, but the picture as a whole is unlike any of the others, save as being much larger than life. The most interesting feature from the point of view of this study is the headdress. At the first glance it looks quite Egyptian, but when one climbs up a ladder with a candle to see it close at hand, it proves to be a drapery with straight folds hanging below the ears and adorned with heavy fringes and plaits of gold almost exactly like those seen in the statues of the Iberian priestess (Fig. 7). Such a detail can hardly be other than traditional; it cannot well be attributed to mere coincidence.

Here, then, are a few Mozarabic presentments of the Virgin existing in Andalucia. To describe all I have seen would need far too much space. If a systematic examination were made of the mediaeval statues and paintings in small towns and villages off the beaten track, material would be obtained for a volume which would throw a blaze of light on the traditional art of the Christians of Andalucia under Islam.

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in a tenth century manuscript. I think the *Codice Albeldense*, but I am quoting from memory. As will be seen, the arrangement of the drapery is too characteristic to be overlooked wherever one may meet with it.

FRANCESCO DI GENTILE DA FABRIANO

During the nineteenth century the work of the painters who lived in the Marches was very much neglected by writers on art, and it has been due to such expositions as those at Perugia and Macerata that the public in this generation has come to realize the interest and charm of painting done in the more remote parts of Italy in the fifteenth century. One realizes, however, that many works of real merit are still hidden away in the inaccessible churches, convents and municipal galleries of distant towns which would bring a respectable amount of fame to their creators were they exposed together in one gallery visited by a larger public. It is difficult to form a just valuation of those men whose works are seldom seen, and then only in isolated examples.

One of the men of the Marches, Francesco di Gentile da Fabriano, has recently been brought to my attention through the chance discovery of one of his works, for some time lost to sight. Any existing estimate of his work, or account of his life, was hard to find. There is almost nothing known about him beyond the fact gleaned from his name which shows that he came from Fabriano. There are no documents by which to date his activities, and any deductions about him must be drawn from his work. What sense we have of his artistic personality is due to Mr. Berenson's reconstruction of his development which he gives in the *Johnson Catalogue*.¹ The author there traces his ever-changing style from the days of his training under Antonio da Fabriano to the influence of Crivelli, Bellini, Vivarini, Melozzo, Verrocchio and Pintoricchio. One sees in this long list of stylistic changes that, like many Marchigiani, Francesco was ever ready to be colored by the new influences brought into the Marches and to respond to those met with outside.

In his sketch of Francesco Mr. Berenson attributes to the artist some seventeen unsigned paintings, including the three in the Johnson Collection. Among these are the portrait of Guidobaldo

¹ Berenson, B. *Catalogue of a Collection of Paintings and some Art Objects*. John G. Johnson, Philadelphia, 1913, Vol. I, pp. 75 ff. All references to Berenson, unless otherwise noted, are to this work.

da Montefeltro in the Colonna Gallery, Rome, a St. Sebastian in the Lille Museum, a double tavola in the Perugia gallery and an Annunciation in his own collection at Settignano. These particular pictures are enumerated here to make the source of the attribution definite, since they are referred to again in the course of the discussion.

A recent visit to the Castello of Bracciano revealed the fact that there is a signed panel there by Francesco (Fig. 1). This represents the Visitation, and inasmuch as it agrees with the description of Crowe and Cavalcaselle,¹ it is probably the one seen by them in the house of the lawyer Dominici at Fermo and published by them in their *History of Painting in Italy*. A note by the editor of the edition of 1914 says that the picture had disappeared.

There are but five other signed works known by Francesco, and not six as listed by Thieme-Becker.² These are: Rome, Vatican, Madonna and Child; Lastra-a-Signa, Perkins Collection, Madonna and Child with St. John Baptist and Christ at the Column; St. Jean sur Mer, Curtis Collection, Ecce Homo; London, Mond Collection, Ecce Homo; Cirencester, Miserden Park, Leatham Collection, Portrait of a Boy.

The picture at Bracciano is on a wooden panel with a pointed arched top.³ Mary and Elizabeth are standing against a gold brocaded curtain, the upper part of which is covered with a dark blue drapery. Above their heads the Holy Dove descends in



FIGURE 1.—THE VISITATION:
BRACCIANO.

¹ Crowe and Cavalcaselle, *History of Painting in Italy*, ed. Borenius, 1914, Vol. V, p. 210, and note.

² Thieme-Becker, *Allgemeines Lexikon der Bildenden Künstler*, 1916, Vol. XII, p. 303.

³ Width, without moulding 23 inches; height about 37.

benediction, while at either side of the curtain hanging fruits are conspicuous against a pale sky.

The Virgin, in a blue mantle with green lining and an inner robe of cream yellow, has her head covered with a crisp white headdress, the long locks of her hair twisted and bound. Elizabeth, who clasps the hands of the Virgin, is clad in brown. The flesh color is of a curious ivory tint without any trace of rose. The drapery is metallic and arbitrary in the arrangement of the folds, in the manner of the Paduan school. The loop of drapery often seen in other examples of Francesco's work appears on the dress of Elizabeth.

The figures of the infant Christ, His hand raised in blessing, and the St. John are pictured on the robes of their mothers. This type of iconography, rare in the latter part of the fifteenth century, would make fairly certain the identification with the Fermo panel where this feature occurred.

The foreground is strewn with roses, marguerites, and a cherry in the approved Crivelli manner and bears at the base the signature FRANCISCUS GETILIS DE FABRIANO; even without this the work is signed by the hatchings of the brush strokes which cover the entire picture and which Mr. Berenson in connection with other works termed "niggling notation."¹ The colors are clear and the panel in good and seemingly untouched condition.

Though this is not a great work, the Visitation has features which make it very pleasing. The colors are harmonious and vibrant, the composition is dignified and united in the simplicity of arrangement which so amply fills the frame. In his modelling of surfaces and feeling for planes Francesco here shows a great improvement over his earlier full length compositions, and more nearly approaches his superior, Lorenzo da San Severino, in that respect. A lack of spiritual feeling results, however, from the contemplative attitudes of the two women who should be regarding each other and sharing the knowledge of the future. Again the evident attempt of the artist to amplify the meaning of the scene beyond the limits of his ability by the use of outgrown iconography leaves one cold.

From a study of all the works attributed to Francesco, the

¹ Beside the "niggling notation," a marked preference for a certain pleasant shade of sap green and a trout-like speckling of red and green on the lining of draperies appear in the early works.

signed paintings seem to take a definite place, forming a group closely related and of nearly contemporary production. This period seems to have been somewhat before the middle years of his working career, for though there are several works of less developed character which owe their inspiration to the local school and would precede this group in point of time, there are also others which show a change in manner and a development



FIGURE 2.—TRIPTYCH: PERKINS COLLECTION: LASTRA-A-SIGNA.

due to contact with Florentine and Umbrian masters of a later date.

The traits which hold five of the six signed works together are: the treatment of the hair, very metallic and sharply marked into locks, not the spinning out of the hairs on the wig-like basis as in the earlier works; the placing of the figures against a curtain or flat ground; a decided interest in natural objects. This tendency is brought out in the butterfly of the Vatican Madonna, the fruits and flowers of the Visitation, the hanging garland of the Leatham portrait, and in the carefully painted flies on the brow

and chest, respectively, of the Mond and Curtis *Ecce Homos*. The one signed work which does not share with the rest the treatment of the hair or the Crivellesque interest in natural history, is the Perkins triptych which is more closely related in technique and type to the Fabriano strain and must be the earliest of the group (Fig. 2).

There is undoubtedly a northern influence perceptible in Francesco's style.



FIGURE 3.—ECCE HOMO: MOND COLLECTION: LONDON.

Mr. Richter saw it in the Mond *Ecce Homo*,¹ and was led to the belief that Antonello da Messina was its source (Fig. 3). Mr. Berenson sees the Flemish strain in the same work and in the Matelica Crucifixion, but does not give more reason for it than that it came from Antonio da Fabriano. The same influence appears also in the heavy draperies of the Johnson Madonna No. 130 and perhaps in the facial type of the St. Elizabeth at Bracciano. Might not this be due to the presence of Justus von Ghent in Urbino? Justus worked for some years prior to 1474 in the palace of Federigo da Montefeltro.² His influence was felt by many artists in

Italy and it would not be surprising if among them was one who lived in the near-by town of Fabriano. The fact that Francesco is accredited with the portrait of Guidobaldo da Montefeltro in the Colonna Gallery (Fig. 4) would add support to the theory of his contact with the work, if not with the personality, of the Fleming. It is interesting in this connection to suggest that the Leatham portrait might represent Guidobaldo when he was older (Fig. 5). The resemblance is not close enough to make the identification sure, but certainly enough to cause conjecture, partic-

¹ Richter, *The Mond Collection*, London, 1910, Vol. II, p. 485.

² Venturi, *Storia dell'Arte Italiana*, Vol. VII, 2, p. 124.

ularly if the similarity of the forms of the mouth and chin in the two pictures is noted.

Another reason for inferring a connection between the work of Francesco and that of Justus von Ghent is found when a figure of the Blessing Christ of the Musée Bonnat in Bayonne, which Mr. Berenson connects with Francesco,¹ is compared with a panel of the same subject in Città di Castello reproduced in Venturi as the work of a follower of Justus.² Any exact conclusion about these paintings cannot be made, as the work has been done from photographs which were very small. If it were not for the badly painted hands of the Città di Castello picture, I should be tempted to think that it also might possibly be the work of Francesco. In the case of the Bayonne Christ the resemblance to the Vatican Madonna is marked enough to leave little doubt of its authenticity.



FIGURE 4.—GUIDOBALDO DA MONTEFELTRO:
COLONNA GALLERY: ROME.

In looking over material collected in the Marches it seems possible to attribute two other paintings to Francesco. One is the work of his earlier period, the other of his last manner. The first is a triptych in the

¹ Mr. Berenson, with the greatest generosity, gave free access to his photographs and notes on Francesco with permission to use them. It was there that the Bayonne picture was grouped with Francesco, though it has not been published by Mr. Berenson. The writer also wishes to acknowledge with gratitude the gift of photographs Nos. 5 and 8 from Mr. Berenson and the permission from Mr. Perkins to have made a copy of No. 2. To M. Georges Bergés of the Musée Bonnat thanks are due for the catalogue of the Museum.

² Venturi, *op. cit.* Vol. VII, 2, pp. 129, 131.

Pinacoteca Comunale of Fabriano, done in the spirit of that locality, the tradition that held over from the time of the great Gentile (Fig. 6). The points which make the attribution reasonable are the treatment of the hair, each hair spun out on a flat mould; the way the hair projects behind the ears, as in the Perugia tavole; the painting of the lobe of the ear in ball

form, the high lights touched with white paint. The Madonna is very like the one in the Perkins triptych and the solid gray background is the same.¹

In the Museo Civico of Pesaro there is a triptych, the central part of which is not by the same hand that painted the two wings and gable top (Fig. 7). The central part, showing Christ carrying the Cross, may be a late work by Francesco; done under the influence of Pintoricchio (with whose work he shows himself familiar in the Johnson Madonna, No. 131), it may show more especially the effect



FIGURE 5.—PORTRAIT: LEATHAM COLLECTION:
CIRENCESTER.

of the Borromeo panel painted by Pintoricchio in 1513. The reasons in this case are found in the similarity of the figure of Christ to the St. Sebastian of Lille (Fig. 8). The hooked loop of

¹ In connection with this triptych it is worth while mentioning the striking resemblance borne it by two other paintings which copy the central section in many details. One, a tavola, is in the Monasterio di S. Maria Maddalena at Matelica; the other, a fresco, decorates a sotto-portico of the Brefotrofio of Fabriano. As I have not seen either of the originals it is impossible to make deductions, but the fresco, at least, does not seem to be by Francesco.

drapery in the robe of Christ is characteristic, and there is a feeling in the Mary akin to that in the St. Elizabeth of Bracciano.

If this is Francesco's work, the date of his activities might well be placed somewhat later than formerly. Mr. Berenson suggested from 1460 to the end of the century. Perhaps from 1475 to 1515 would better cover the perplexing variety of style. In so



FIGURE 6.—TRIPTYCH: PINACOTECA COMUNALE: FABRIANO.

secluded a region as Fabriano, older strains holding over would explain the harking back to the Gentile types and the crudities of Francesco's early style, while the later date would explain the astonishing change and advanced ideas that appear as the artist travels about—such a contrast as is made by the Perugia tavole and the Berenson Annunciation.

In looking for further evidence of a nature to show that Francesco could have been flourishing in the early part of the sixteenth century, a painting of the Annunciation in the Seminario of

Pesaro comes to mind.¹ This panel is very like the one in Setignano in the curious birds and foliage of the foreground and background. There is also a similar treatment of the woodwork,—intarsia of light wood on a dark ground being used in each. This painting bears the date 1510, and even though it might not



FIGURE 7.—CHRIST CARRYING THE CROSS: MUSEO CIVICO: PESARO.

be the work of our artist, yet it throws light on the date of this type of composition.

If one is willing to admit the later date of Francesco's activities, what is there to prevent a change in the relationship between him and Lorenzo da San Severino? This, according to Mr. Berenson, was that of master and follower. Lorenzo is known to have been involved in a lawsuit in 1468, when he had to pay a fine.²

¹ L. Venturi, *L'Arte*, XVIII, p. 198.

² L. Venturi, *L'Arte*, XVIII, p. 191.

He could not have been much less than twenty at that time. This would make his dependence on a less gifted worker seem doubtful.

There is still much work to be done on this question of the early works of these two men and their fellow painters. As an instance of the confusion that exists between their styles, the altarpiece at Serrapetrone may be noticed. Both Mr. Perkins and Mr. Berenson have attributed it to Lorenzo, while another critic inclines to the idea that it may be by Francesco.¹ Again, the triptych of the Piersanti Museum in Matelica was given to Lorenzo by the directors of the Macerata exhibition; Mr. Perkins denied this, but was not able to name the author, while Mr. Berenson gives it to Francesco.

Francesco, though a minor artist, is an interesting one. His Madonnas are of a gentle and pensive type that makes them



FIGURE 8.—SAINT SEBASTIAN: LILLE.

very charming; his feeling and reverence ring true and he seems to express a really sincere belief in the saints and holy personages he depicts. His sense of the decorative is well brought out in the Perkins triptych with its warm colors and rich Gothic frame. In his portraits there is a simplicity and directness of characterization in the features, even though Sig. Leonello Venturi may remark on the "deficient corporeal architecture" of the portrait of the young Guidobaldo!² In his St. Sebastian of Lille and the Pesaro Christ the heads are full of feeling and emotion without

¹ Count Umberto Gnoli expressed himself thus in a conversation.

² L. Venturi, *L'Arte*, XXI, p. 27.

being sentimental. In short, Francesco would seem to have proved himself worthy of more attention and credit than he has received.

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THE ALTAR OF MANLIUS IN THE LATERAN

THE well-known marble altar of Manlius in the Lateran was discovered in 1846 in the ruins of the theatre of the Etruscan city Caere. With it were found, in more or less fragmentary form, statues of Augustus, Tiberius, Claudius, and other less certainly identified members of the Julio-Claudian house, which are now to be seen with the altar in the sixth room of the Pagan Museum of the Lateran.¹ The altar is of simple rectangular form with projecting base and cornice and with scrolls at the top. It is adorned on all four sides with reliefs which in spite of their slight artistic merit present scenes of considerable interest. The front (Fig. 1) bears the inscription (*C.I.L.* XI, 3616) carved in excellent letters of the early Empire *G(aio) Manlio G(aii) f(ilio) cens(ori) perpet(uo) clientes patrono*. Below the inscription from which it is separated by garlands hanging from bucrania is a relief representing a sacrificial scene, one of the most valuable for Roman ritual that has been preserved from antiquity. On the right a Roman clad in the toga which is drawn over his head is pouring a libation from a *patera* upon an altar on which may be seen fruit and the flames of the fire. To the left behind the altar is a camillus, clad in the costume usual to the type, with a fringed cloth (*mappa*) over his left shoulder. He holds an *urceus* in his right hand. In the background between the camillus and the Roman may be seen the head and shoulders of another figure. To the left of the camillus, somewhat in the rear, is a flute-player. To the left of the altar is a bull whose head is being held by two kneeling boys clad in aprons (*cultuarii*). Beside the bull

¹ Some of the statues were discovered in 1840, but they undoubtedly came from the same building as the objects found later. See account of excavations, Benndorf-Schoene, *Die antiken Bildwerke des lateranischen Museums*, 121-122. For this altar see *Ibid.* No. 216; Altmann, *Römische Grabaltäre*, No. 235, fig. 143, 143a; Helbig-Amelung, *Führer*, II, No. 1177, p. 17; Bowerman, *Roman Sacrificial Altars*, 1913, pp. 24-27; Wilpert, *L'Arte*, II, 1899, p. 8, fig. 7a. The altar was first published in *Mon. dell'Inst.* VI, 13; cf. Henzen, *Annali dell'Inst.* XXX, 1858, 5-17.

with axe uplifted to the left is the *popa* or slayer of sacrificial victims. Clad like the boys in a short apron he strides to the right ready to deal the death blow. Behind the bull is another *popa* with a sacrificial hammer (*malleus*) in one hand, and a platter,



FIGURE 1.—ALTAR OF C. MANLIUS: ROME.

apparently of flowers and fruit, in the other. On the two ends of the altar are almost identical representations of a beardless male figure with long curly hair (Fig. 2). He is clad in a short girded tunic and boots and holds a *patera* in one hand and a *rhyton* in the other. The figure stands on a slight rocky projection between laurel bushes.

Although these three faces have frequently been published, the back (Fig. 3) which is of some importance for the interpretation of the altar is known only from the unsatisfactory drawing in the original publication of the altar.¹ In the centre of this face is a female figure seated on an elaborately adorned high-backed throne which rests on an elevated rocky base. She is clad in *stola* and *palla*, the latter of which is drawn over her head. She holds a *patera* in her right hand and a cornucopia, now much mutilated, in her left. Her feet rest on a low footstool. On either side of this figure, who is clearly intended to be a goddess, are groups of three standing figures. Facing the goddess whose throne is turned slightly toward the left are three women clad like her in *stola* and *palla* which is also drawn over their heads. The one nearest rests her right hand on the knee of the goddess and the other two have their hands raised as if in supplication. On the other side of the throne are three men clad in tunic and toga. The one in the centre has his right hand at the throat of the man on the extreme right. The man nearest the goddess against whose throne he leans looks away from her to watch the two men beside him.



FIGURE 2.—ALTAR OF C. MANLIUS: END.

The man nearest the goddess against whose throne he leans looks away from her to watch the two men beside him.

The figures on either end of the altar are the familiar type of Lares, generally believed to represent the household gods of the Manlii.² The sacrificial scene on the front has regularly been attributed to the cult of the goddess enthroned on the rear, who

¹ *Mon. dell'Inst.* VI, 13; cf. Reinach, *Répertoire des Reliefs* Vol. III, p. 276. The position of the altar makes it impossible to secure a good photograph of this face.

² Wissowa s.v. *Lares*, Roscher's *Lexikon*, col. 1897; *Religion und Kultus der Römer*², p. 173 and note 7.

has been variously identified as Fortuna, or Concordia.¹ Yet an insuperable objection to such a relation in the two faces lies in the fact that the victim is evidently a bull, and that Roman ritual law did not permit the sacrifice of a male victim to a female



FIGURE 3.—ALTAR OF C. MANLIUS: REAR.

divinity.² Another explanation of the scene must, therefore, be secured.

This altar has often been compared with a series of altars that preserve dedications to the Lares Augusti set up by *vicorum magistri* of Rome, monuments of the cult of the Lares Compitales

¹ Cf. Henzen, Benndorf-Schoene, and Helbig, *loc. cit.*

² Cicero, *De leg.* II, 12, 29; Arnob. VII, 19. Cf. Wissowa, *Religion und Kultus der Römer*², p. 413.

which Augustus in his reorganization of the *vici* in Rome identified with the Lares Augusti and associated with the worship of his Genius.¹ There is a striking analogy between the altar from Caere and one of these altars now in the Conservatori at Rome. On two sides of it are figures of Lares similar to those on our altar, and on the front there is a sacrificial scene. In this relief four *vicorum magistri*, the officials usually in charge of the cult of the Lares Compitales, are gathered about an altar and beside them, reproduced in much smaller scale, are the victims, a bull for the emperor's genius and a pig for the Lares. It is important to note in this connection the fact learned from the *Acta Fratrum Arvalium* that the bull was the regular sacrifice to the emperor's Genius, while the ox, a more usual victim in other cults, was offered to deified emperors.² Now although Pompeian household shrines show that this cult of the emperor's Genius gave rise to the cult of the master's genius with the Lares familiares in the home, the sacrifices offered in such cases seem never to have been *hostiae maiores* such as the bull. It is unlikely that a private monument to Manlius's Genius and Lares familiares should have been adorned with scenes so closely analogous to those in vogue in the imperial cult at the time, and it is further improbable that such a monument should have been erected in a public place decorated with statues of princes and rulers as was the theatre of Caere. With the abundance of evidence for the spread of this new form of emperor worship in Italian municipalities³ it is clear that the scene on the altar from Caere is a sacrifice to the emperor's Genius and that the Lares on the sides are the Lares Augusti.⁴ The character of the reliefs, the forms of the letters in the inscription, and the absence of *cognomen* in Manlius's name all indicate that the

¹ Altar in Conservatori, Rome. Cf. Altmann, *Grabaltäre*, p. 176, No. 232, figs. 141, 141a, *C.I.L.* VI, 30957; Altar in the Vatican, Altmann, *op. cit.* p. 177, No. 234, fig. 142. *C.I.L.* VI, 445; Altar in the Uffizi, Florence, Altmann, *op. cit.* p. 175, No. 231, *C.I.L.* VI, 448.

² *C.I.L.* VI, 2041, 2042, 2044, etc. See Krause, *De Romanorum hostiis quaestiones selectae*, Dissertation, Marburg, 1894.

³ Cf. Wissowa, *op. cit.* p. 173, note 2, for summary of evidence in municipalities.

⁴ The laurel, a familiar imperial emblem, provides further support for this identification. It is, however, not conclusive evidence for, like other features of the official cult of the Lares Compitales, the laurel is sometimes borrowed by the private household cult. Compare the laurel bushes beside the Lares on a wall painting of the Casa del Centenario in Pompeii, Daremberg et Saglio, *Dict. des Ant. Gr. et Rom.*, s. v. Lares, fig. 4343.

altar belongs to the beginning of the empire and probably to the Augustan Age. Its inscription to Manlius, an eminent citizen who held the very unusual title of censor for life,¹ is to be explained by the fact that Manlius's clients who set up the altar were prominent in the cult of the Lares Augusti and the Genius of the emperor. They may have been the officials in charge of one of the shrines of the cult. These officials, regularly four in number, held the title *magistri*. They were usually freedmen; in any case they were recruited from the strata of society to which the client class belonged. It is natural that Manlius's clients should have honored their patron with an altar on which was represented a scene from the cult which it was their special prerogative to observe. It so happens that there exists for Caere an inscription which attests this cult not for the *vici*, but for the *curiae*, a form of city division, which the town had, perhaps, retained from Etruscan times.²

It remains to identify the goddess on the rear of the altar and to explain the scene there represented. The generally accepted view is that she is Fortuna who is here the presiding divinity of Caere.³ The frequent representations of Venus Pompeiana at Pompeii show the importance in Italian municipal cults of these personifications of cities which are to be traced originally to the inspiration of Eutychides's famous Tyche of Antioch. Bearing in mind the physical features of the towns sometimes reproduced in these personifications, one is tempted to see in the high rocky pedestal on which the goddess's throne is placed an indication of Caere's situation on a steep tufa ridge. There is, moreover, evidence, which has never been cited in this connection, for an oracle cult of Fortuna at Caere. To no other divinity could have belonged the lots at Caere, of which the mysterious shrinkage in numbers is recorded by Livy among the *prodigia* that marked

¹ The title which is known in no other municipality except Caere occurs in only one other inscription, *C.I.L.* XI, 3617, a record of another Manlius who was, perhaps, the son of this one. On the office see Rosenberg, *Der Staat der alten Italiker*, 1913, p. 68.

² *C.I.L.* XI, 3593. *Deos curiales genium Ti. Claudi Caisaris Augusti p. p. Curiae Aserniae A. Avillius Acanthus dictator*, etc. (the next line is in an erasure). As Rosenberg has pointed out (*op. cit.* pp. 133-134), the *dei curiales* are to be identified as the Lares of a curia. Cf. the inscriptions on three cippi, *Lares semitales*, *Lares [c]uri[a]les*, *Lares viales*, Dessau 9251, a, b, c.

³ Cf. Helbig-Amelung, Benndorf-Schoene, Bowerman, *loc. cit.*

Hannibal's entrance into Italy in 218.¹ Such a cult may well have been revived by Augustus and the goddess may have received the *cognomen* Augusta attested for her at Pompeii as early as 3 A.D.² Since Fortuna Augusta (or Augusti as the name was sometimes written) was in conception a goddess whose functions were closely akin to the Genius Augusti,³ her association with the Lares Augusti and the emperor's Genius would be natural.

But there are two objections to this identification. The goddess is not the usual imperial type of Fortuna and the scene about her throne is not easy to explain with reference to the cult of that divinity. It is true that the patera and the cornucopia are the regular attributes of the Greek ἀγαθή τύχη⁴ and are found on representations of Fortuna on coins of Vespasian, Hadrian, and Septimius Severus.⁵ But in these cases the goddess is always represented standing. The seated Fortuna,⁶ a frequent type on imperial coins, is invariably represented with the rudder of a ship which, even for the standing type, is the most common attribute of Fortuna.⁷ Moreover the goddess on our altar, seated to the left with patera and cornucopia, conforms, except for the veiled head, to the prevailing type of Concordia Augusta as she appears on numerous coins beginning with the reign of Nero.⁸ The veiled head is characteristic of the same goddess as she is represented on republican coins.⁹ This seated type of the goddess, which is, however, subject to many variations,¹⁰ may have been fixed when

¹ Livy XXI, 62. According to Cicero the oracle at Praeneste was the only such cult still in use in his day. *De Div.* II, 41, 85-87.

² *C.I.L.* X, 824.

³ Cf. Otto, *s.v. Fortuna*, Pauly-Wissowa, col. 37.

⁴ Cf. J. S. Hild, *s.v. Fortuna*, Daremberg and Saglio, *op. cit.*, fig. 3236, 3247, 3248.

⁵ Vespasian's coin has the inscription *Fides Fortuna*. Cohen, *Médailles Impériales* Vespasian 162; Hadrian 769 ff.; Septimius Severus 185.

⁶ Cf., however, the late silver seated statuette representing the Fortuna of Constantinople who holds the patera and cornucopia. Gardner, *J.H.S.* 1888, pp. 47-81, pl. V.

⁷ Cohen, *Médailles Impériales*, passim. The rudder is the goddess's chief attribute on republican coins also.

⁸ Cohen, *op. cit.* Nero, 66, 67; Vitellius 13-16; Vespasian 62, 63, 71-74.

⁹ Grueber, *Coins of the Roman Republic in the British Museum*, I, 418, 420, 479, 576, 577; II, 498.

¹⁰ Cf. Aust's summary of the various types, *s.v. Concordia*, Pauly-Wissowa. See also Peter, *s.v. Concordia*, Roscher's *Lexikon*.

Tiberius in 10 A.D. reconsecrated to Concordia Augusta¹ the venerable temple of Concordia which he had rebuilt on the south slopes of the Capitoline.² Tiberius's desire to emphasize his harmonious relations first with Augustus and later with his mother Livia provided a special motive for the cult of the goddess. It was with reference to the latter relationship that the building of Eumachia at Pompeii was consecrated about 22 A.D.³—before the break between mother and son—to Concordia Augusta and Pietas.⁴ Still given the many irregularities in the type, and the absence of early imperial representations of Concordia Augusta, I should not feel inclined to urge this identification if it did not provide at least a partial explanation for the figures grouped about the goddess on the altar from Caere. The attitude of entreaty evident in the three women on the left may well represent a prayer to the goddess of Concord to effect a reconciliation between the two men on the right. The relation of the third man to the scene must, however, remain an enigma. There is very possibly a reference to some particular event with which we are not familiar.⁵

¹ Cf. *Fasti Praenestini*, C.I.L. 12, p. 308. There is no adequate reason to justify the doubts that have often been expressed about this date. Cf. Heinen, *Klio*, 1911, p. 173.

² The cult statue seems to have had a laurel crown. Cf. Ovid, *Fasti*, VI, 91 f. This feature is also found on a republican coin. Cf. Grueber, *op. cit.* I, p. 492.

³ Mau-Kelsey, *Pompeii, its Life and Art*², pp. 110 ff., has shown that since the building was decorated in the third Pompeian style it cannot, as has formerly been supposed, have dated from the reign of Nero. Mau has strong arguments to support his dating of the building about 22 A.D.

⁴ Livia's special relation to Concordia is evident from the fact that she dedicated a shrine to the goddess in the Porticus Livia in 7 B.C. (Ovid, *Fasti*, VI, 637). It is possible that the goddess on our altar whose face is unfortunately obliterated had the features of Livia. The veiled head common in Livia's portraits and the fact that she is known to have been identified with the other abstractions, Pietas, Iustitia, and Salus, favor the view, even though there is no certain instance of her representation as Concordia. Mau (*op. cit.* p. 112) believed that the headless statue of Concordia Augusta (a standing figure with cornucopia), found in the building of Eumachia, had the features of Livia. Perhaps the same is true of the much mutilated bust of a female figure with cornucopia on the fountain relief at the entrance to the same building in Abbondanza Street (Mau, *op. cit.* fig. 50, p. 117). This head, the mistaken identification of which with Abundantia gave the modern name to the street, is almost certainly Concordia. But the relief is too much damaged and the criteria for Livia's portraits are too uncertain to enable us to reach any conclusion.

⁵ Cavedoni, *Bull. dell'Inst.* 1859, pp. 172-174, who alone has favored the

In any case whether the goddess on the rear is Concordia or Fortuna, this altar from Caere is an important early imperial monument of the cult of the Lares Augusti and of the Genius of the Emperor—another testimony to add to the constantly increasing volume of evidence for the hold which the imperial cult speedily acquired among the old Italic stock.

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identification of the goddess with Concordia, suggested that the two men might have the relation of debtor and creditor. The third man, he thought, might be Manlius.

ARCHAEOLOGICAL DISCUSSIONS¹

SUMMARIES OF ORIGINAL ARTICLES CHIEFLY IN CURRENT PUBLICATIONS

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GENERAL AND MISCELLANEOUS

Archaeological Interpretation.—In a recent book entitled *Archäologische Hermeneutik* (Berlin, 1919, Weidmann; 432 pp.; 298 figs.; 4to.) CARL ROBERT gives a detailed and thoroughly illustrated exposition of archaeological method in the interpretation of ancient monuments. After an introductory chapter on "Seeing, Drawing, and Describing," he deals with the identification of figures and with interpretation based on the representation alone, on the myth represented, on literary sources, and on other monuments; on the installation of the work in question, on its milieu, pendants, and provenance. There are chapters on the reconstruction from monuments of myths not recorded in literature, on deceptive sources, on restorations and forgeries, on the reconstruction of fragmentary works, and on falsely interpreted, uninterpreted, and uninterpretable monuments.

Coin Hoards.—In an essay entitled *Coin Hoards* (Numismatic Notes and Monographs, No. 1; New York, 1920, American Numismatic Society; 47 pp.; 6 figs.; 12mo.) SYDNEY P. NOE discusses the economic conditions and personal motives which lead to the hoarding and burying of coins; the laws which govern proprietorship in finds of coins; the condition of coins found in such hoards; and their archaeological and historical importance. Several famous hoards are described.

Palaeolithic Art compared with Aegean Art.—In *Mitt. Anth. Ges.* XLV, 1915, pp. 141-161 (34 figs.) J. SZOMBATHY, after outlining the culmination and the successive stages of decay of Minoan-Mycenaean art applies the implications of this gradual decline to the study of the prehistoric art of central and Western Europe. The spiral motive, which, as it is found in Mediterranean art is to be traced through the Aegean civilization to Egypt, occurs in its first development on the neolithic pottery found at Butmir near Serajevo, and on other contemporary sites of Central and Western Europe, but later undergoes

¹ The departments of Archaeological News and Discussions and of Bibliography of Archaeological Books are conducted by Professor DEANE, Editor-in-charge, assisted by Professor SAMUEL E. BASSETT, Professor C. N. BROWN, Miss MARY H. BUCKINGHAM, Dr. T. A. BUENGER, Professor HAROLD R. HASTINGS, Professor ELMER T. MERRILL, Professor LEWIS B. PATON, Professor A. S. PEASE, Professor S. B. PLATNER, Professor JOHN C. ROLFE, Dr. JOHN SHAPLEY, Professor A. L. WHEELER and the Editors, especially Professor BATES.

No attempt is made to include in this number of the JOURNAL material published after June 30, 1921.

For an explanation of the abbreviations, see pp. 108-109.

degeneration. With the spread of Mycenaean influence another wave of spiral decoration passed over all Europe. Other decorative motives are transmitted in a decadent form from the Aegean to Central European works which are to be dated as late as the middle of the first millennium B.C. Turning to the consideration of palaeolithic art in Europe, the author finds that in its earliest period, about 35,000 B.C. it produced some skilful plastic representations. Relief and painting were of somewhat later origin; and both relief and drawing show a gradual decay due to stylization and conventionalization. The art of the Aurignac period is of higher quality than that of succeeding periods, which show a decline analogous to that of late Aegean art. We must assume that the earliest known phase of palaeolithic art was preceded by long stages of development, the unknown products of which are the "missing links" of cultural evolution.

Children's Drawings and Primitive Art.—In a dissertation entitled *Physioplastiek bij Kinderen* (64 pp.; 8 figs.; Zeist, 1921, J. Ploegsma) H. P. J. KOENEN discusses children's drawings from the standpoint of experimental psychology, and compares them with the drawings of primitive man.

The Continuity of Prehistoric Culture.—In *R. Arch.*, fifth series, VI, 1917, pp. 286–293, S. REINACH gives a detailed summary of an address delivered by Sir ARTHUR EVANS at the Meeting of the British Association for the Advancement of Science held at Newcastle in 1916. The evidence for civilization in the quaternary period, for its wide spread and its continuation, is given, and the view is advanced that this early civilization actually continued to exist in such measure that the Minoan civilization may be regarded as its lineal descendant after the lapse of several thousand years. This conclusion is not fully accepted by Mr. Reinach.

The Celts.—In *R. Arch.*, fifth series, VIII, 1918, pp. 74–109, LÉON JOULIN gives a sketch of the history and civilization of the Celts from the earliest times until they were conquered by the Romans and the Germans. Literary and archaeological sources are separately examined and combined. A bibliography is appended.

The Copper Age in the Northern Caucasus.—In *R. Arch.*, fifth series, XII, 1920, pp. 1–37 (pl.; 25 figs.), M. ROSTOVZEV describes in some detail four *Kourganes* (one at Maëkop, two at Tsarskaïa, one at Oul) and their contents. He shows that the objects found in these tombs of the Northern Caucasus belong to the same period as Elamite and Egyptian objects of the Copper Age. They resemble also objects found at Troy, but are earlier. To the previously known centres of Bronze Age civilization in the East—Turkestan, Elam, Mesopotamia, Egypt—which exhibit an animal style developed in the decoration of common objects and a rich development of artistic activity in general, another is thus added—the Northern Caucasus. Here progress was native, not the result of importations, and was continued in the Bronze Age. Mycenaean influence is not found. Hittite analogies are interesting, and Caucasian influences upon the Hittites is more likely than Hittite influence upon the Caucasus. This early Caucasian civilization undoubtedly influenced the regions further north. *Ibid.* pp. 112–114 is a summary of two articles and a series of lectures by Professor Rostovzev on archaeological research in Southern Russia.

A Gandara Relief.—In *Ber. Kunsts.* XLII, 1921, pp. 51–54 (3 figs.) A. GRÜNEWALD identifies as Vāta, the wind-god, a figure in a Gandara relief be-

longing to the Leitner collection in Berlin. The wind-god has an important part in Buddhist beliefs concerning the life of the soul after death.

Buddhist Incense Burners.—In *Ber. Kunsts.* XLII, 1921, pp. 87–89 (3 figs.) A. V. LE COQ describes several forms of incense burners discovered in his excavations in Eastern Turkestan.

The Chinese Jou-yi.—In *R. Arch.*, fifth series, VIII, 1918, pp. 110–130 (5 figs.) G. GIESELER writes of the *jou-yi* ("scepters" or "commanders' bâtons") of China. Their curved form is derived from the constellation of the dragon, and in their decoration there are elements derived from the myth of the dragon. Their use as symbols of happiness and longevity is discussed.

The Myth of the Dragon in China.—In *R. Arch.*, fifth series, VI, 1917, pp. 104–170 (17 figs.) G. GIESELER discusses the myth of the dragon in China, showing that its origin is not palaeontological, but astronomical, pointing out its connection with the calendar, and explaining its mystical meaning and the forms in which the dragon appears in art.

An Album of Japanese Portraits.—In *B. Mus. F. A.* XIX, 1921, pp. 2–16 (37 figs.) K. T(OMITA) describes an album of paintings of "The Thirty-six Immortal Poets," consisting of thirty-six panels executed in black on white paper, with reserved use of color. With the exception of three portraits, which are by Sumuyoshi Hiromichi (1598–1670), the drawings are ascribed to Tosa Mitsusuke. Though made in the Ashikaga period, they illustrate the survival of the Tosa school, which developed a distinctly national style of painting in the Fujiwara period.

Statues of Terra-cotta.—In *R. Arch.*, fifth series, XIII, 1921, pp. 136–138, W. DEONNA gives a list (with bibliographical references) of 21 terra-cotta statues which have become known since the publication of his work *Les statues de terre cuite dans l'antiquité*, in 1908.

The Leconfield Collection.—In *R. Arch.*, fifth series, VI, 1917, pp. 294–299 (14 figs.), S. REINACH gives an illustrated summary of the catalogue of the Leconfield collection. [MARGARET WYNDHAM, *Catalogue of the Collections of Greek and Roman Antiquities in the Possession of Lord Leconfield*, London, 1915, Medici Society. xxiii, 142 pp.; 86 pls. 4to.]

Portrait Sculptures.—In a brochure entitled *Ikonographische Miscellen* (Kgl. Danske Videnskabernes Selskab., Histor.-filol. Meddelelser. IV, 1, 94 pp.; 35 pls., 21 figs.) F. POULSEN discusses a herm of Hyperides and a herm of Chrysippus at Steensgard, Denmark; a head of the type of Epaminondas in Moscow; a Greek male portrait head and a head of a Roman lady in Edinburgh; a portrait of Menander, a head of a Roman boy, a bust of a Roman lady, and a head of a man wearing a stephane, all in the University of Pennsylvania Museum; and the following works in the Ny Carlsberg Glyptothek: the seated poet, a female head of the Augustan period (Ny Carlsberg, No. 519), a head of Caligula (No. 637), and the statue of Metrodorus, the Epicurean.

Ampeliana.—In *R. Arch.*, fifth series, XI, 1920, pp. 236–270, F. PRÉCHAC discusses the passages toward the end of the eighth chapter of Ampelius, which relate to the Artemisium at Ephesus, the Mausoleum, and the statue of the Nile. By a series of ingenious emendations (*e.g.* *Isidis* for *sidi*, §12) he gives meaning to the corrupt text, which he then interprets, showing that Ampelius gives some valuable information. From the passage concerning the Colossus of Rhodes (*sol cum quadriga Rhodiorum*), and other notices of that work and

the Mausoleum, he conjectures that the Mausoleum of Hadrian at Rome was surmounted by a pyramid and a *quadriga*.

The Mechanics of the Ancient Balance.—In *Jh. Oest. Arch. I.* XVI, 1913, Beiblatt, cols. 179–196 (5 figs.) E. NOWOTNY continues his discussion of the mechanics of the ancient balance begun *ibid.* col. 5. *Ibid.* cols. 197–206 (2 figs.) J. JÜTHNER adds notes on the same subject.

Proportion in Ancient Art.—In *Mün. Jb. Bild. K.* XI, 1921, pp. 109–115 (4 figs.) E. MÖSSEL reports on his studies of proportion in the tectonic and free arts of antiquity and the Middle Ages. He maintains that (1) relations of measurements in monuments of architecture and the other arts. from the early Egyptian period through the Middle Ages show a systematic regulation; (2) this system is not in general of numerical but of geometric character; (3) this geometric system is derived from the regular division of the circle into 4, 5, 6, 7, 8, or 10 parts; (4) since geometric construction determines equally the ground plan and elevation of buildings and the architectural details, it effects a homogeneous arrangement; (5) the division of the circle into ten parts, with its derivatives, is the most frequently employed system; (6) geometric regularity determines also the design of the so-called free arts, so far as these are associated with structural ideas; (7) the origins of this geometry are to be sought in primitive technical procedure and in astronomical discoveries. It gained acceptance through priestly usage and prescription, and had originally no aesthetic motive; but this was added later. A very commonly used proportion is the ratio of the radius of a circle to the side of the inscribed decagon, which may be expressed R: S 10=1,000: 0,618=1,618: 1,000. The application of this ratio and its derivatives to ancient architecture is exhibited in tables of the dimensions of a series of Egyptian and Greek temples.

EGYPT

Egyptological Bibliography.—In *R. Arch.*, fifth series, VI, 1917, pp. 197–212 and VIII, 1918, pp. 150–165, SEYMOUR DE RICCI gives a classified bibliography of Egyptology.

The Throne Room of Merenptah.—In *Mus. J.* XII, 1921, pp. 30–34 (pl.) C. S. F. (ISHER) gives a detailed description of the principal hall of the palace of Merenptah at Memphis, which has been excavated by the Eckley B. Coxe Jr. Expedition of the University of Pennsylvania. Although the walls are preserved only to the height of four feet, the remains discovered permit an almost complete restoration of the hall and its decoration.

A Chair from Thebes.—In *The New York Historical Society Quarterly Bulletin*, IV, 1920, pp. 67–70 (2 figs.) CAROLINE R. WILLIAMS describes a chair which is among the objects bought by Dr. Henry J. Anderson in Thebes in 1847–48, and presented to the New York Historical Society in 1864. Its proportions and shape indicate a date about 1500 B.C. The legs have the form of the fore and hind legs of a lion. For ornament light and dark wood are used in alternation, and inlays of bone or ivory and ebony. The chair is mortised, pegged, and glued together, without the use of nails. It resembles a piece at Leyden (*B. Metr. Mus.* VIII, 1913, p. 75, fig. 6); and the panelling of the back is like that of a chair found at Thebes in 1898–99 (The Marquis of Northampton,

Spiegelberg and Newberry, *Report on Some Excavations in the Theban Necropolis*, pls. V and VI).

An Egyptian Sketch on Limestone.—In *The New York Historical Society Quarterly Bulletin*, IV, 1921, pp. 91–99 (fig.) CAROLINE R. WILLIAMS proposes a new interpretation of a satirical drawing on a limestone flake in the Egyptian collection of the New York Historical Society. It shows an animal standing on its hind legs, holding a fan in one forepaw, and offering a plucked fowl to a seated and partly draped animal which holds a flower in one forepaw and a bowl in the other. The figures have been interpreted as a fox and a lion, a cat and a lioness, or as two cats. Mrs. Williams points out that the seated and larger figure is a rat; the smaller one a cat. The humor of the satirical drawings of the Egyptians often lies in the reversal of the usual situation. The date of the New York drawing may be as early as Dynasty XVIII, or as late as Dynasty XXI.

The Arabarches of Egypt.—In *R. Arch.*, fifth series, VI, 1917, pp. 95–103, JEAN LESQUIER finds that the Arabarches (Alabarches) was a fiscal agent concerned with the taxes; he was not governor of the desert.

The Thiasus of Ombos.—In *R. Arch.*, fifth series, XIII, 1921, pp. 24–36, HENRI SOTTAS discusses the twenty-two Greek *ostraca* relating to the interment of Ibises and Falcons at Ombos. The seven demotic Egyptian *ostraca* are less fully treated. The *ostraca* were published by Preisigke and Spiegelberg in 1914 ('Die Prinz-Joachim Ostraka, Griechische und demotische Beisetzungsurkunden für Ibis und Falkenmumien aus Ombos,' *Abhandlungen der Strassburger Wissenschaftlichen Gesellschaft*, 19). The words πορθῶρης and πορευβήκης are explained as titles, not (as by Preisigke) as proper names. The dates at which the persons named held the various offices of the thiasus are determined. They extend from 79 to 53 B.C.

The History of Egyptology in America.—In *The New York Historical Society Quarterly Bulletin*, IV, 1920, pp. 3–20 (3 figs.) CAROLINE R. WILLIAMS gives an account of the development of American interest in Egyptology in the nineteenth century. The first important Egyptian collection to be acquired for public exhibition in this country was made by Dr. Henry Abbott, an English physician who lived in Egypt from 1822 to 1852. This collection was bought by the New York Historical Society in 1860, and is still shown in the building of that society. It has value for the student of Egyptology, not only because of its intrinsic interest, but because its limited size and compact exhibition offer opportunities for convenient comparison between objects of different dates and styles.

BABYLONIA, ASSYRIA AND PERSIA

The Dynasty of Agade.—In *Mus. J.* XII, 1921, pp. 75–77 (fig.) L. LEGRAIN reports that a clay tablet in the University of Pennsylvania Museum has thrown new light on Sumerian chronology, giving for the first time a complete list of the dynasty of Agade. It is proved that Naram Sin, commonly called the "son of Sargon" was actually his great-grandson.

The Dynasties of Isin, Larsa and Babylon.—In *Z. Morgenl. Ges.* LXXIV, 1920, pp. 423–428, A. UNGNAD, on the basis of newly published texts recon-

structs the dates and relations of the dynasties of Isin, Larsa, and Babylon as follows

ISIN	LARSA	BABYLON
2356 Ishbi-Irra	2356 Naplanum	
	2335 Emisum	
2324 Gimil-ilishu		
2314 Idin-Dagan		
	2307 Samum	
2293 Ishme-Dagan		
2273 Lipit-Ishtar		
	2272 Zabaya	
	2263 Gungunum	
2262 Ur-Nimurta		
	2236 Abi-sare	
2234 Pur-Sin		
	2225 Sumu-ilu	2225 Sumu-abum
2213 Iter-pisha		2211 Sumu-la-ilu
2208 Irra-imitti		
2201 NN.		
2200 Enlil-bani		
	2196 Nur-Adad	
2180	2180 Sin-idinam	
2176 Zanziya		2175 Sabium
	2174 Sin-iribam	
2173 MM.		
	2172 Sin-iqisham	
2168 Ur-Duazagga		
	2167 Silli-Adad	
	2166 Eri-aks	
2164 Sin-magir		2161 Apil-Sin
	2154 Rim-Sin	
2153 Damiq-ilishu		2143 Sin-muballit
		2123 Hammurabi

The Sumerian School-Texts.—In *Orientalia*, II, 1921, pp. 51-53, P. Deimel shows that we have duplicates of school exercise-tablets varying in age from two or three centuries to two thousand years. These tablets agree down to minute details. This shows the accuracy with which the Sumerian literature was transmitted in the Babylonian schools. The whole mass of Sumerian literature, that was already in existence as early as 3000 B.C., was exactly copied by the following generations in the school-books, so that even two thousand years later no important variations had come into the text.

Gilgames and Engidu.—In *J.A.O.S.* XL, 1920, pp. 307-335, W. F. ALBRIGHT investigates the well-known figures of Babylonian mythology, Gilgames and Engidu, and seeks to show that they were originally genii of fecun-

dity. According to Sumerian historiographers Gilgames was the fifth king of the dynasty of Eanna. The king-list gives him only 126 years, hardly more than Tammuz, who was torn away in the flower of his youth. Evidently there is a close connection between the hero's vain search for immortality and the short duration of his career. The original solar character of Gilgames is apparent in all the myths. The hero's adventures in the epic remind one of the deeds of Heracles and of Samson, whose essentially solar character is clear. In the capacity of solar hero, Gilgames has much in common with "his god" Lugalbanda. It may even be shown that the saga of Gilgames has been enriched with the spoils of the latter. In the cult, at least, the solar side of Gilgames was quite subordinate to his aspect as a god of fecundity. The chthonic character of our divinity, while in its specific development implying solar relationship, is no less an indication of kinship with gods of vegetation. We cannot, therefore, be surprised to find many Tammuz motives in the cycle of Gilgames. The most sympathetic feature in the Gilgames-epic is the enduring friendship between the king of Erech and his companion, the erstwhile wild-man Engidu. So harmonious is their friendship that the latter almost seems a mere shadow, designed solely to act as the hero's mentor, a reflection of his buoyant ideal of life and dismal picture of death.

The Classical Name of Carchemish.—In *J.R.A.S.* 1921, pp. 47-51, A. H. SAYCE questions the usual German identification of Carchemish with classical Oropus or Europus. In the geographical list of Rameses III at Medinet Habu the names of Mitanni and Carchemish are followed by Uru with the determinative of place. In Mitannian this would have been pronounced Uru-pi, which is the original of the Greek Oropus. Originally Uru-pi was the district south of Carchemish, known to us as Pethor.

The Reform-Texts of Urukagina.—Urukagina, Patesi of Lagash (ca. 2800 B.C.), was a usurper who dispossessed the family of Lugalanda. In order to secure the throne to his dynasty and to weaken the party of Lugalanda he entirely reorganized the government. The records of these reforms are contained in the inscribed cones B and C of Urukagina. These are translated and provided with copious notes by P. DEIMEL, in *Orientalia*, a supplement to *Biblica*, published by the Pontifical Biblical Institute, II, 1921, pp. 3-31.

Babylonian and Hebrew Musical Terms.—In *J.R.A.S.* 1921, pp. 169-191, S. LANGDON calls attention to a remarkable catalogue of Assyrian psalms discovered at Asshur, and recently published by Ebeling, *Religiöse Keilschrifttexte aus Assur*, No. 158, with titles that throw much light upon the titles in the Hebrew Psalter. The Babylonians and Assyrians adopted the Sumerian chants for their own sacred music, and each psalm was usually sung to the accompaniment of a single instrument. The Sumerians classified their chants by the names of these instruments. Instruments were named from the number of their strings or notes. Thus an instrument of six strings was called "the sixths"; one of three notes was called *shushshan*, or "two sixths." This is the origin of the Hebrew direction 'al *shôshannîm*, which has nothing to do with "lilies," but means "on the three-toned instrument," probably a pipe in the form of an ox-head, such as has been found at Babylon. In like manner 'al *hashshēmînîth* means "on an eight-stringed instrument." The title *shiqû* appears for the penitential psalm. This is evidently the origin of the Hebrew title *shiggayôn*.

The Old Assyrian Calendar.—The names of the old Assyrian months have hitherto been known only partially. The list is now completely reconstructed on the basis of newly discovered tablets by H. EHELOFF and B. LANDSBERGER in *Z. Morgenl. Ges.* LXXIV, 1920, pp. 216-219. The names are the same as in the contemporary Babylonian calendar, and in one tablet the Assyrian and the Babylonian months are equated, but in an inscription of Tiglathpileser I the Assyrian calendar is a month ahead of the Babylonian, *i.e.*, the first Assyrian month, *Qarrate* (*sic*), is the twelfth Babylonian month; and in still another tablet the Assyrian *Qarrate* is the eleventh Babylonian month. Whether in the course of the centuries the Assyrian calendar actually came to differ from the Babylonian, or whether these differences indicate merely learned theories of the priests, it is impossible to say at present.

A Seal of the Persian Period.—In *Pal. Ex. Fund*, LIII, 1921, pp. 16-19, E. J. PILCHER describes a cone-shaped seal of bluish-white chalcedony, which depicts the moon-god adored by a worshipper, and which bears the inscription in Phoenician letters, "To Nabu-kigalni." This name means "Nabu is our foundation," and it has never yet been met in Babylonian texts, although it is a perfectly good Babylonian formation. *Ishdu* is the word ordinarily used for "foundation," and *kigallu* means also "Hades," so that it is easy to see why it was generally avoided in forming personal names. All of the Phoenician letters in this inscription, except the first, are reversed.

Textual Criticism of Inscriptions.—In *J.A.O.S.* XL, 1920, pp. 289-299, R. G. KENT illustrates from the Behistan Inscription the fact that the textual errors in inscriptions are of the same sorts that are commonly found in manuscripts. In this inscription he finds instances of errors of omission with no apparent reason, omission for phonetic accuracy, haplography, haplography with skipping, tele-haplography, pseudo-haplography, errors of addition through dittography and tele-dittography, and errors of change through addition and through subtraction.

SYRIA AND PALESTINE

The Chronology of the Kings of Judah and Israel.—In *Biblica*, a new review published by the Pontifical Biblical Institute of Rome, II, 1921, pp. 3-29, A. M. KLEBER subjects the data of the Books of *Kings* and *Chronicles* to a fresh investigation. He follows the thoroughly scientific method of putting all the dates from 932 to 586 B.C. in a vertical column, and then setting opposite to them the beginnings of kings' reigns that are established by Assyrian chronological data. He then attempts to bring into accord with these established facts the other statements of *Kings* and *Chronicles*. He maintains that all the statements can be harmonized, if one recognizes the following principles: (1) that the last year of one king's reign was also counted as the first of his successor, (2) that the kings of Judah used a sacred year beginning with Nisan, while the kings of Israel used a civil year beginning six months later with Tishri, (3) that there were interregna, (4) that there were co-reigns, and (5) that co-reigns were entered chronologically, and were cross-checked on the contemporary rival reign doubly: once at the year of accession of a king as co-ruler, a second time at the year of accession as sole ruler.

The "Lady of Lions" in the Amarna Letters.—In two of the Amarna Letters (Nos. 273 and 274 in Knudtson's edition) the queen of a Palestinian town entitles herself "Mistress of *UR-MAḤ-MEŠ*, i.e., "Mistress of Lions." The meaning of this term has hitherto been entirely obscure. In *Z. Morgenl. Ges.* LXXIV, 1920, pp. 210-211, H. BAUER suggests that "Lions" is one of the many Palestinian place-names meaning "lions." These letters mention Aijalon and Zorah as places lying in the neighborhood, so that the residence of their writer is to be identified with *Kefira*, "Young lion," the modern *Kefira* near El Kubêbe, eight kilometers from Aijalon and twelve kilometers from Zorah, which is probably the same as *Kefirim* in *Neh. vi. 2*. The original form of the name was probably *Beth-Kefirim*, "House of young lions."

Nehemiah's Wall.—In *J. Bibl. Lit.* XXXVIII, 1919, pp. 171-179, K. FULLERTON gives a careful study of the interpretation of the narrative of Nehemiah's procession recorded in *Neh. xii. 31-39*. This has an important bearing upon the archaeological problem of the course of Nehemiah's wall.

The Stele of Mesa.—In *R. Arch.*, fifth series, X, 1919, pp. 59-89, D. SIDER-SKY gives text and translation of the stele of Mesa, King of Moab, preceded by a history of the discovery and restoration of the monument, and followed by remarks concerning the Moabite language, a brief defence of the genuineness of the stele, and a detailed bibliography.

The Head of the Corner.—In *R. Arch.*, fifth series, X, 1919, pp. 1-10 (2 figs.), J. SIX interprets the "head of the corner" (*Matthew*, xxi, 42, "The stone which the builders rejected, the same is become the head of the corner") as the stone in which the pivot at the bottom of the door turned. Many such stones, from many ancient sites, are known. Many texts are cited in support of this interpretation. The pivot at the top of the door turned sometimes in a hole in the lintel, sometimes in a bronze bracket-ring which projected from the jamb.

The American School in Jerusalem.—In *R. Arch.*, fifth series, XIII, 1921, pp. 123-131, DENYSE LE LASSEUR publishes an appreciative account of the work of the American School of Oriental Research in Jerusalem, under the guise of a review of the first volume of the *Annual* of the School (for 1919-1920).

A Nabataean Inscription.—In *R. Hist. Rel.* LXXXI, 1920, pp. 47-57, L. CLERMONT-GANNEAU proposes a new reading and interpretation of a Nabataean inscription found by the Princeton University Expedition at Umm es-Surab (*Publications of the Princeton University Archaeological Expedition to Syria in 1904-1905 and 1909*, Division IV, *Semitic Inscriptions*, Section A, Nabataean Inscriptions, No. 2). The suggested translation is "This is the *arba'an* which Mohlemon, 'Adryon, and Honron have made for Anamom their father, in the second year of Rabbel the King, king of Nabataea."

ASIA MINOR

The Stele of Chelidon.—In *R. Arch.*, fifth series, XII, 1920, pp. 185-188 (pl.), TH. REINACH republishes the stele from Tekke, near Zela (Fr. Cumont, *R. Ét. Gr.* XV, 1902, p. 318, No. 14; *Recueil des inscriptions du Pont et de l'Arménie—Studia Pontica* III, 1910, p. 246, No. 273), now in the Cervantès-collection in Paris. In l. 2 he reads Μαῖῆται, which he regards as an ethnic name.

Pontos (l. 3) is also ethnic and, in this form, a ἀπαξ λεγόμενον. The name Maeote would be that of the deceased Chelidon's mother (possibly a slave, named from the country of her origin, the shores of the Palus Maeotis).

Plan and Construction of Priene.—In *R. Arch.*, fifth series, XI, 1920, pp. 366–371, PATRICE BONNET calls attention to some peculiarities in the plan and construction of Priene; showing, among other things, that all houses have the same orientation, that the uneven, sloping site was chosen as more wholesome than the plain, that the height and arrangement of buildings were carefully regulated, that water was abundant and well distributed, that the agora was divided into three parts, that the altar before the temple of Athena fronted the temple and was decorated on three sides only, the western side being entirely occupied by stairs, that the entire city is constructed in most logical fashion, and, finally, that polychromy was freely employed on the buildings.

Notes on Inscriptions from Miletus.—In *Jh. Oest. Arch. I.* XVII, 1914, Beiblatt, cols. 257–272 E. WEISS publishes notes on inscriptions from the Delphinium at Miletus.

Pisidian Wolf Priests.—By a series of analogies, Sir W. M. RAMSAY deduces from the name Gagdabos Edagdabos on a Pisidian [priest's] tombstone, the conjecture that in the mountains of Pisidia a wolf-god was worshipped under the name Head-Wolf, and that the Roman slave-name Davus *alias* Gdabos, means *Wolf*, one of the tribe who worship the wolf-god. He adds some remarks on the difficulties experienced by the Greeks in trying to express in their alphabet words which, in their native form they could not even pronounce, and on the original meanings of the four Ionian tribe-names. (*J.H.S.* XL, 1920, pp. 197–202.)

Aphrodite Daitis.—In *Jh. Oest. Arch. I.* XVII, 1914, pp. 145–147 (fig.) J. KEIL argues that Aphrodite Daitis, worshipped at Ephesus and elsewhere, was so called because at her festival young men and women met at a feast and that acquaintances thus formed sometimes led to marriage. The name Aphrodite Αἰδομάτη, also found at Ephesus, is to be explained in the same way.

The Financial History of Ancient Chios.—Chios, the birthplace of Homer and of the first family of sculptors in marble, a source of celebrated wines and a great slave mart, was rich in worldly goods as well as in fame, and its abundant and well-studied coinage affords an excellent field for the correlation of numismatic with political and social history. A sketch of this double stream of events in the eastern Aegean is given by P. GARDNER in *J.H.S.* XL, 1920, (pp. 160–173) from the first coining of electrum and silver in the early part of the sixth century until after the conquest by Rome in 190 B.C. The fluctuating spheres of influence of Persian, Aeginetan and Athenian standards of weight in the Greek world and its outskirts and the reasons for the wide-spread use of Cyzicene and Chian coins are among the matters touched upon.

GREECE

ARCHITECTURE

Mycenaean Studies.—A special study of the painted plaster floor of the palace at Mycenae, made by G. RODENWALDT in 1914, is published in *Jb. Arch. I.* XXXIV, 1919, pp. 87–106 (3 pls.; 11 figs.) Although the painting had suffered

great injury since its discovery by Tsountas in the early eighties, enough could be traced to support certain conclusions. The floor-scheme, with a border of stone slabs in megaron and prodomos and with a sidewise rather than a forward movement of the spacing, is much more like that of the Cretan palaces than of Tiryns, where the Greek, un-Minoan feeling for structure and coördination begins to appear. The general design is a checker-board marked off by dark red stripes into slightly irregular rectangles of three or four different ground colors, which follow each other in diagonal sequence. The patterns within the rectangles bear a marked relation to Egyptian ceiling decorations, which is due less to direct imitation than to a trade in textiles either between the two countries or between them both and Syria. The painted surfaces in both cases imitate an earlier use of textile coverings. There are several layers of painting on the floors and the once open court in front of the porch shows signs of having been roofed over and made into another room of about the same size as the megaron, in quite early times. The entire building lay in ruins, with no up-standing walls, at the time the Greek temple and the houses surrounding it were built.

Transportation of Marble for the Theatre of Delos.—In *R. Ét. Gr.* XXXII, 1919, pp. 240–250, G. GLÖTZ restores a fragmentary inscription relating to the transportation of materials for the theatre at Delos (see *B.C.H.* XVIII, 1894, p. 162 ff.; *Inscriptiones Deli*, II, No. 203). It records payment for the carrying of 153 marble blocks of cubical shape, the dimension of which is one foot. These were probably intended for the stairways between the *kerkides*, above the *diazoma*.

SCULPTURE

The Ludovisi Relief.—Certain early fifth century terra-cotta statuettes of Hera from the temple of Hera at Tiryns characterize her as a matron or the goddess of matronhood by a square of thick cloth held in front of the bare breasts. The cult of this Hera *τελεια* at Tiryns and elsewhere and a cult of Hera *παρθένος* in Arcadia, are attested by Pindar and Pausanias, and with these traditions belongs that of the spring of Canathos at Nauplia, in which Hera bathed every year to regain her virginity. These bits of evidence have combined to convince S. CASSON that Hera rising from her bath in the spring of Canathos is the subject represented on the Ludovisi "throne." The nude maiden playing the flutes and the draped matron scattering incense would then be symbolic of two aspects of her divinity. This interpretation does not profess to support any theory of the counterpart in Boston, the close relation of which to the Ludovisi relief is so far rather assumed than proved. (*J.H.S.* XL, 1920, pp. 137–142; pl.; fig.)

The Female Head from the South Slope of the Acropolis.—The identification of the beautiful but badly injured fourth century marble head of heroic size, in the National Museum at Athens, known only as "from the south slope of the Acropolis," is discussed by F. STUDNICZKA in *Jb. Arch. I.* XXXIV, 1919, pp. 107–144 (35 figs.). The hair band brought low on the forehead and the traces of a garland of metal indicate a Bacchic connection, and the marks of the hands, laid one against the side of the head, the other on the top, suggest an Ariadne, but awake and seated, not reclining like the familiar statue of the Vatican. This position of Ariadne surprised by the approach of

Dionysus is seen in a group on a cameo in England and on vases, doubtless copied from the theatre, and corresponds with literary descriptions of the scene. The marble group may have stood under one of the small temple-like buildings which were erected along the Street of Tripods in the fourth century to support the bronze prize tripods.

The Statue of Aphrodite from Cyrene.—Two views of the very beautiful statue of Aphrodite found by the Italians at Cyrene in 1913 (see *A.J.A.* XIX, 1915, p. 107), are published with comments by E. A. GARDNER. The figure, lacking head and arms but otherwise uninjured, is of the Anadyomene type, representing the act of wringing out the dripping hair. It is a Hellenistic masterpiece, undoubtedly of the Alexandrian school. (*J.H.S.* XL, 1920, pp. 203–205; 2 pls.; fig.)

Aphrodite Anadyomene.—In *R. Arch.*, fifth series, VIII, 1918, pp. 131–149 (fig.) W. DEONNA discusses a marble group in the Dattari collection (Reinach, *Répert.* IV, p. 230, 4; Seymour de Ricci, *R. Arch.* 1907, ii, pp. 103 ff.), which represents Aphrodite Anadyomene with a smaller representation of herself at her right and, at her left, a small group of two children embracing each other. Other monuments—for the most part Gallo-Roman—offer parallels and furnish an explanation of this group of figures. The gesture of Aphrodite—wringing or binding her hair—symbolizes fertility. Here the goddess of fertility is protecting the nuptial pair. The group might be intended as a wedding present, though possibly, since Aphrodite is also a chthonic deity, it may have been meant to be deposited in a tomb. The connection between Gaul and the East is well known.

The Colonna Artemis.—In *Ber. Kunsts.* XLII, 1921, p. 87 (fig.) B. SCHRÖDER, in substantiation of his theory that the Colonna Artemis (No. 59 in the Berlin collection) is a copy of a fifth century work (see *Jb. Arch. I.* XXVI, 1911, pp. 34 ff.), illustrates a replica of the head, which is now set on another statue of Artemis in the Berlin collection (No. 63). The simplicity of its form, its sharpness of modelling, and its calm expression are characteristic of fifth century art.

Three Reliefs from Phalerum.—In *R. Arch.*, fifth series, XI, 1920, pp. 1–81 (3 pls.), THÉOPHILE HOMOLLE discusses three reliefs from Phalerum (Reinach, *Rép. Rel.* III, p. 346, 2, 3; p. 319, 3; *A.J.A.* IX, 1894, pp. 202–205, pl. xii; 1910, p. 501 f.; and frequently published elsewhere) and the interpretations proposed by other scholars. He concludes that the reliefs on the two sides of the stele dedicated by Cephisodotus are of different dates and were ordered for different reasons. There is no close connection in meaning between them. But the second of these reliefs, representing Artemis, Poseidon, Cephisus, and the nymphs, is closely connected in meaning with the relief dedicated by Xenocrateia, and both refer to the adoption by Cephisodotus of Xenocrateia's son Xeniades.

The Statue of "Polyhymnia."—In *Jh. Oest. Arch. I.* XVI, 1913, pp. 183–287 (14 figs.) W. KLEIN discusses the "Polyhymnia" of Berlin. The head is wrongly restored, as the Dresden head shows. The figure should face the right, as in the relief of Archelaus of Priene, not towards the spectator. The statue once formed part of a group consisting of Apollo and the nine Muses, copies of some of which still exist. The group dates from the third century B.C.

A Statuette of a Boxer.—In *R. Ét. Gr.* XXXII, 1919, pp. 149–157 (fig.) A. DE RIDDER discusses again a bronze statuette of an athlete which he described

in *Bronzes antiques du Louvre*, pp. 34–35 (pl. 19). The left forearm of the figure has been recovered since the date of the earlier publication, and marks on the hand indicate that it held a cestus. The athlete represented was, therefore, a boxer. The patina suggests that the provenance of the statuette was Magna Graecia. It is an eclectic work of the last years of the fourth century B.C.

VASES AND PAINTING

Agatharchus.—Some speculations on the art of Agatharchus, the young Samian artist who, in 467, painted the scenery for Aeschylus's *Seven Against Thebes* to look like real battlements and towers of a city wall, are published by J. SIX in *J.H.S.* XL, 1920, pp. 180–189 (2 figs.). This striking work seems to have been the beginning of the art of realistic perspective among the Greeks. To the same artist may be ascribed the discovery that color effects are greatly heightened by the juxtaposition of contrasting colors. The basis for this study is largely in literary sources, but some monuments such as the town wall in the frieze of the Heroön at Gjölbaschi-Trysa in Lycia, are cited.

Ancient Vases in the Museum at Orleans.—In *R. Arch.*, fifth series, VIII, 1918, pp. 1–51 (21 figs.) MADELEINE MASSOUL describes and discusses the more interesting and important among the ancient vases in the museum at Orleans. These include:—Cypriote vases (second millennium B.C.), Cypriote vases (tenth to seventh century B.C.), an Island vase of Geometric style (ninth to eighth century), Mycenaean vases (twelfth to tenth century), vases from Camirus (seventh and sixth centuries), Corinthian vases, a Chalcidian vase, an Ionian vase (sixth century), Attic vases (sixth, fifth and fourth centuries), Italic vases, and Plastic vases, including vases decorated with reliefs. One black-figured Attic amphora has on one side Ajax and Achilles drawing lots in the presence of Athena, on the other four hoplites. A red-figured lecythus has a scene of battle, a red-figured cylix has in the interior a youth on horseback, another is adorned both within and without with scenes from the palaestra.

Late Attic Vases.—In *Jh. Oest. Arch. I.* XVI, 1913, pp. 141–177 (20 figs.) C. WATZINGER examines certain vases of Meidias and points out the connection of vases of Aristophanes with them. The latter depict Giants and Centaurs and show close affiliations with the Phigaleia frieze. The earliest of these vases go back to about 420 B.C.; the later ones are earlier than 407 B.C. There is also a group of Apulian vases which have connection with them. Furthermore certain Pompeian wall-paintings of the Fourth Class (Death of Pentheus, and Heracles strangling the Serpents) are also to be associated with these vases. All of these monuments show the influence of a great painter of the latter part of the fifth century B.C. and the writer concludes that he can have been no other than Zeuxis.

INSCRIPTIONS

Inscriptions from Athens, Megara, and Tenos.—In *R. Arch.*, fifth series, VI, 1917, pp. 1–67 (46 figs.), PAUL GRAINDOR publishes 16 inscriptions from Athens, 30 from Megara, and one from Tenos. The most interesting text is the one from Tenos, which gives the conditions of admission into a society at Tenos.

The "Sacred Law" of Delos.—In *R. Ét. Gr.* XXXII, 1919, pp. 167–178, F.

DÜRRBACH publishes the text of the *ἱερὰ συγγραφή* of Delos, a part of which appeared in *B.C.H.* XIV, 1890, pp. 431-433 and 452. The text is accompanied by critical notes.

A Decree in Honor of Julia Domna.—In *Jh. Oest. Arch. I.* XVI, 1913, pp. 249-270 (5 figs.), A. VON PREMERSTEIN discusses and restores the fragmentary Attic decree directing that certain cult honors be paid to Julia Domna.

COINS

The Bull-Type on Coins of Magna Graecia.—Coins of a number of cities of Magna Graecia display the type of a bull, either in natural form, or androcephalic, or as a man with a bull's horns and ears. GIULIO GIANNELLI, in *R. Ital. Num.* XXXIII, 1920, pp. 105-142 (figs.), traces the type from its origin (the river Achelous), points out the reasons for its adoption by the Italian cities that used it, and connects it with the religious cults of each locality.

The Octobols of Histiaea.—In a paper entitled *The Octobols of Histiaea* (Numismatic Notes and Monographs, No. 2; New York, 1921, American Numismatic Society; 25 pp.; 2 pls.; fig.; 12mo) E. T. NEWELL proves that the Histiaeian octobols which show the local nymph seated on the stern of a ship, with a stylis in her left hand, are to be dated in the years 340-338 B.C., and not in the third century B.C.; and that the type is significant of the enthusiasm of the city for Athens in its brief period of liberation from Macedonian rule.

The Kyparissia Hoard.—E. T. NEWELL, introducing a series of papers on Alexander Hoards, has published a detailed description of thirty-five coins found a few years ago at Kyparissia, and now in the National Collection at Athens. The Alexander coins show that this hoard was not buried before 327 B.C., and probably not much later than this date. It probably belonged to "a Macedonian soldier who was stationed in the Peloponnesus after the unsuccessful attempt, in 330 B.C., of the Spartan king Agis to overthrow the Macedonian supremacy." (*Alexander Hoards: Introduction; the Kyparissia Hoard*; Numismatic Notes and Monographs, No. 3; New York, 1921, American Numismatic Society; 21 pp.; 2 pls.; 12mo.)

GENERAL AND MISCELLANEOUS

Mycenaean Costume.—*Jh. Oest. Arch. I.* XVI, 1913, Beiblatt, cols. 151-162 MARGARETE LÁNG discusses the costume of the Mycenaean woman.

The Phaestus Disk.—In *Pal. Ex. Fund*, LIII, 1921, pp. 29-49, E. W. READ attempts a new interpretation of the Phaestus Disk. He assigns arbitrary alphabetic values to the forty-five characters that occur in this inscription and by elaborate tables seeks to show that the combinations are such as could not occur in any real language, but only such as could be found in musical notation. He thinks, accordingly, that the signs do not represent syllables, or alphabetic sounds, but musical tones.

Lions in Greek Art.—In a dissertation entitled *Lions in Greek Art* (Bryn Mawr, Pennsylvania, 1920, Bryn Mawr College; 54 pp.; 8vo) ELEANOR F. RAMBO shows "that the historical types of the lion in early Greek art are not indigenous to Greece, but come to Greece from the East." The successive chapters deal with lions in Greek literature and language, in the painting, the sculpture, the coins, and the other minor arts of the Greeks.

The Death of Ariadne.—In *R. Arch.*, fifth series, VIII, 1918, pp. 170–180, S. REINACH discusses the various accounts of the death of Ariadne and of her cult, with especial attention to the cult at Amathus. This leads to a discussion of the youths who took a female part, then of the *covade* or *cowada* in general, of the passage in *Deuteronomy*, xxii, 5, which forbids a woman to wear a man's clothing or a man to wear a woman's, and finally of the trial of Joan of Arc.

Pegasus, the Hippogriff, and the Poets.—In *R. Arch.*, fifth series, XI, 1920, pp. 207–235, SALOMON REINACH finds that the conception of Pegasus as the steed of poets is not ancient, but that this, as well as the hippogriff, is probably derived from a half line of Virgil, *Jungentur iam grypes equis* (*Ecl.* VIII, 27), and a line of Catullus (LV, 24), *Non si Pegaseo ferar volatu*. Ariosto, not Boiardo, invented the hippogriff.

Prometheus.—In *R. Arch.*, fifth series, XIII, 1921, pp. 132–135 (2 figs.), LOUIS TIRET explains the myth of Prometheus as follows:—Prometheus is the block of wood in which fire is to be started by revolving a stick. The stick is revolved by a bow and its string. The block is held stationary, the stick is vertical, and the bow, extended horizontally, resembles an eagle with spreading wings (cf. *ἀερός* and *ἀέτωμα* = pediment).

Sirens.—In *R. Arch.*, fifth series, XII, 1920, pp. 110 f., GABRIEL ANCEY finds the key to the character and myth of the sirens in the word *σειρήν*, *σειρά-πλέγμα*, a cord or a twisted lock of hair, hence (as in Serbia) a maiden. Then the *σειρήν* is transferred by metaphor to the foam of the waves. The Nereids are daughters of an all-knowing Proteus. The Sirens differ little from them. They are two, one knowing the future, one the past. The long hair leads to comparison with the story of Samson and Delilah.

Some Teachings of the Eleusniian Mysteries.—In *R. Arch.*, fifth series, X, 1919, pp. 173–204, SALOMON REINACH finds that Pausanias (II, 17, 4) refers to the Eleusinian Mysteries and especially to some myth connected with the pomegranate, which has not been handed down to us; that some other unknown myth was related touching the prohibition of beans; that the accusation of profaning the mysteries brought against Aeschylus had some connexion with an Egyptian doctrine that Artemis was the daughter of Persephone; that at Eleusis Dionysus, Demeter, and Persephone formed a triad; further that works of art were among the means employed in teaching the initiates; and that the teaching included, not only myths, but also moral doctrines.

ITALY

ARCHITECTURE

Notes on the Palace of Diocletian at Spalato.—In *Jh. Oest. Arch.* I. XVI, 1913, Beiblatt, cols. 169–178 (4 figs.) G. VON STRATIMIROVIĆ discusses Niemann's reconstruction of the prothesis of the mausoleum and the pronaos of the little temple in the palace of Diocletian at Spalato.

Drawings of Roman Buildings.—In *R. Arch.*, fifth series, VI, 1917, pp. 213–230 (7 figs.), HENRY LEMONNIER publishes, with comments, some original drawings made by Antoine Desgodetz for his book, *Les Édifices antiques de Rome* (1676–1677). One drawing gives a section and a plan of the temples of Isis and Serapis (now lost), another some of the stucco ornaments of the

Colosseum, and others show interesting variations from the engravings in the book.

The Odeum at Catania.—In *R. Arch.*, fifth series, XI, 1920, pp. 271–289 (4 figs.), SALVATORE MIRONE describes the odeum at Catania. This was a semi-circular structure, with seats divided into *cunei*, but without *diazomata*. It had a roof. This building was probably first erected about 412 B.C., at the time of the Athenian occupation. Later it was neglected, but was repaired under Roman rule.

Roman Columns in Milan.—In *Boll. Arte*, XIV, 1920, pp. 84–96 and 171–184 (4 pls.; 10 figs.), C. ALBIZZATI offers a detailed study of the columns that stand near S. Lorenzo Maggiore in Milan. It is shown that the present arrangement is not the original one of Roman times; but that the columns were set up in the Middle Ages, after the construction of the church, and that fragments from a peripteral temple of the second or third century, A.D. were used.

The Subterranean Basilica at the Porta Maggiore.—In *R. Arch.*, fifth series, VIII, 1918, pp. 52–73 (7 figs.) FRANZ CUMONT describes the subterranean basilica found in 1917 near the Porta Maggiore at Rome, and discusses especially its decoration. He concludes that the basilica was constructed not later than the first century after Christ for the celebration of the mysteries of the Pythagoreans. Another article on this subject by the same author is found in *Rass. d' Arte*, VIII, 1921, pp. 37–44 (11 figs.)

SCULPTURE

Two Italic Reliefs in the Ny-Carlsberg Museum.—In *R. Arch.*, fifth series, XII, 1920, pp. 169–184 (6 figs.), F. POULSEN discusses two reliefs in the Ny-Carlsberg Museum: (1) The Aegisthus relief (*Glyptothèque Ny-Carlsberg*, pl. III, Reinach, *Rép. d. Rel.* II, 183, 1), which Furtwängler (*Antike Gemmen* III, p. 266, fig. 140) rightly declared to be Italic, not Greek, and not archaic. It should probably be assigned to the third century B.C. The scene is incomplete. Either the murder of Clytemnestra or preparations for it should be added at the right of the existing relief. (2) The relief (Furtwängler, *Antike Gemmen*, III, p. 268; *Glyptothèque Ny-Carlsberg*, pl. IV B) representing the upper parts of three women and the head of an animal hitherto called a horse, but now called a mule. This relief is Italic, more specifically Roman, and may—since the existing relief is only a fragment—have represented a scene of a mule race, perhaps the *Consualia*, at which horses and mules ran without drivers or riders.

Roman Reliefs in Herberstein, Styria.—In *Jh. Oest. Arch.* I. XVII, 1914, Beiblatt, cols. 185–202 (10 figs.) W. VON SEMETKOWSKI describes fifteen Roman reliefs in the church of St. John in Herberstein, Styria. The most important represent a lion attacking a deer, and three Centaurs fighting a lion and a lioness. The latter, which is 0.35 m. high and 1.94 m. long, is full of spirit. Perseus and Andromeda are crudely represented on another relief.

A Hunting Monument of the Emperor Hadrian.—The eight round reliefs which are in the corners over the small arches of the Arch of Constantine in Rome have been recognized and discussed as of the time of Hadrian, and their content and original disposition are studied in detail by H. BULLE in *Jb. Arch.* I. XXXIV, 119, pp. 144–172 (10 figs.). They form a series commemorating the Emperor's feats in the hunting of big game during his journeys to all parts of

the Empire in the years 119–134 A.D., with the departure from and return to Rome, and include dedications of the spoils to various divinities. The subordinate personages in the groups can be approximately identified, in some cases as portraits. The reliefs would be most appropriately placed on the inner side of an altar-enclosure similar to that of the Great Altar at Pergamon or the Ara Pacis of Augustus. In style they are descended from the Pergamene frieze of Telephus, but the round form is derived from the custom of hanging dedicated shields on the walls or friezes of temples.

A Bust of Constantine II.—In *R. Arch.*, fifth series, X, 1919, pp. 51–58 (pl.; 9 figs.), JULES MAURICE argues that the bust at Arles (BERNOULLI, *Römische Ikonographie*, I, p. 121) called a bust of Marcellus really represents Constantine II, who was born at Arles, August 7, 314 (not 317) A.D. General historical considerations and also comparison with coins support the view that the bust represents Constantine II.

Imitations of the Bacchic Reliefs in the Casino Borghese.—In *Jh. Oest. Arch. I. XVI*, 1913, pp. 208–211 (2 figs.) C. HUELSEN calls attention to various reproductions by artists of the fifteenth and sixteenth centuries of different figures of the Bacchic reliefs in the Casino Borghese (see *A.J.A. XVIII*, 1914, p. 233).

INSCRIPTIONS

An Inscription from Murgantia.—In *R. Arch.*, fifth series, XII, 1920, pp. 40–46, JEAN COLIN discusses the inscription *C.I.L. IX*, 147*, which Mommsen, followed by others (e.g. Sandys, *Latin Epigraphy*, p. 204), regarded as a forgery. All the irregularities which have led to the rejection of this inscription are paralleled in other inscriptions of undoubted genuineness. This inscription also must, therefore, be accepted as genuine.

The Inscription on the Column of Trajan.—In *R. Arch.*, fifth series, XII, 1920, pp. 245–248, CH. BRUSTON finds that the current reading of the inscription on the base of the column of Trajan. . . . *ad declarandum quantae altitudinis mons et locus tant [is oper]ibus sit egestus*, is incorrect. The restored words should be *tantis opibus*, and the meaning is “to declare that as great as is the height of a mountain, by the expenditure of so great riches the place also was cleared,” i.e., the Emperor was so generous as [to build the forum, etc.] and also to spend a mountain of money to clear the place for it.

COINS

Asses of C. Clovius and Q. Oppius.—POMPEO BONAZZI, arguing in detail on grounds of fabric, palaeography, chronology, and analogy with other coins, would assign the *as* of C. Clovius (Babelon I, p. 366), known by about 120 examples, to a mint of Gallia Cisalpina, when Clovius was governor of that province; and of the two *asses* of Q. Oppius (Babelon II, p. 276; Bahrfeldt *Nachträge III*, p. 151), the former, known by fifty examples, to a Sicilian mint (Syracuse?), the latter, known by five examples, to one in Spain (Corduba). (*R. Ital. Num. XXXIII*, 1920, pp. 143–158 (pl.).)

Early Roman Denarii.—A find of 33 denarii and five quinarii at Orzivecchi (Brescia), described in detail by P [OMPEO] B [ONAZZI] in *R. Ital. Num. XXXIV*, 1921, pp. 67–68, owes its interest to the locality of its discovery, joined to the fact

that all the coins are of the types usually assigned to a period no later than substantially the third century B.C. The concealment of the hoard is naturally dated as the time when Rome reestablished her power in Cisalpine Gaul after the Second Punic War (say 200–190 B.C.).

"Restored" Coins of Titus, Domitian, and Nerva.—Under the title "Restored" Coins of Titus, Domitian, and Nerva, H. MATTINGLY points out that the Flavians wished by this series of "restored" coins to link their dynasty up with the Caesarian founders of the empire. The restorations were confined to the coinage in copper in order to unite senate with emperor in the act of declaration of continuity. The selection of personages was made in accordance with official judgment of their meritorious character. A list of all known examples of coins restored in the three reigns is appended, correcting many errors and omissions in Cohen and Gneecchi (*Num. Chron.* 1920, pp. 177–207).

Two Medallions of Lucilla.—GIOVANNI PANSA would interpret the reverse type on the medallion of Lucilla (Gneecchi II, p. 51, No. 10) as the presentation of the three sons of the empress to a protectress divinity of infancy (Juno? Venus?). The reverse type on the other medallion (Gneecchi II, p. 51, and pl. 76, No. 8) he would read as a rite of magic lustration for infancy, derived from the Eleusinian mysteries (*R. Ital. Num.* XXXIII, 1920, pp. 159–168; figs.).

GENERAL AND MISCELLANEOUS

Archaeology and Philology.—The relations between archaeology in Italy and classical philology are discussed by G. LAING in *Cl. Journ.* XVI, 1921, pp. 451–463.

Maritime Archaeology of Pompeii.—In *Neapolis*, I, 1914, pp. 353–371 (pl.; 6 figs.) LUIGI JACONO publishes some notes on the maritime archaeology of Pompeii: (1) a new suggestion regarding the coast line of the port of Pompeii; (2) studies of ancient *piscinae*, showing that in the period covered by the last years of the Republic and the first two centuries of the Empire the coast did not sink more than 0.50 m.; (3) the identification of fishes represented in a mosaic of Casa 38 at Pompeii (*Not. Scav.* 1910, p. 556).

The Prohibition of Mining in Italy.—In *R. Arch.*, fifth series, X, 1919, pp. 31–50, MAURICE BESNIER discusses the prohibition of mining in Italy under the Republic (Pliny, *N. H.* III, 138, XXXIII, 78, XXVII, 77). The *lex censoria* limiting the working of the gold mine of Victimulae and the *senatus consultum* prohibiting mining in Italy are both assigned to the time of the Gracchi. The purpose was to prevent a servile insurrection and also to prevent the speculations of the publicans in Italy and to turn their attention to the mines of Spain. The opposing views of other scholars are refuted.

The Sale of the Effects of Commodus.—In *R. Arch.*, fifth series, XII, 1920, pp. 249–268 (fig.) SALOMON REINACH discusses the sale of the personal property of the murdered Emperor Commodus (Dion Cassius LXXIII, 5; Aelius Lampridius, *Alex. Severus*, chap. XLI; and especially Julius Capitolinus, *Pertinax*, chap. VIII). Besides clothing, armor, personal ornaments, furniture, and slaves, there were carriages *perplexis diversisque rotarum orbibus* and *exquisitis sedilibus*, i.e., with seats which turned on an axis, so that the occupant could face a breeze, avoid the sun, and the like. Other carriages were *iter metientia* and *horas monstrantia*, i.e., were equipped with hodometers and clocks, like

modern automobiles. Heron of Alexandria (who lived, probably, about the time of Marcus Aurelius and Commodus) invented a hodometer which worked with cog-wheels and is here described and illustrated. The clocks in the carriages were water-clocks. Many ancient inventions were lost because they were not protected by law and were, therefore, of no commercial value, and also because the presence of slaves made them unnecessary.

Trade in Lead in Roman Times.—In *R. Arch.*, fifth series, XII, 1920, pp. 211-244 (5 figs.), MAURICE BESNIER begins a study of the lead trade in Roman times. Ingots of lead were inscribed with the names of emperors and numerical signs. Two of Sardinian origin are known and about sixty each from Spain and Great Britain. The mines of southwestern Sardinia were worked under Hadrian and later. They belonged to the Emperor. They were probably known to the Carthaginians and the Greeks. Lead and silver were produced very early in Spain. In Roman times the most important mines were in southwestern Spain, though others were in Lusitania. Carthagera was the chief place of export. The Spanish stamped ingots belong to the end of the Republic and the beginning of the Empire. *Ibid.* XIII, 1921, pp. 36-76 (6 figs.), the British production and the exports to Gaul and Germany are discussed. Lead was found in Somerset (Mendip Hills), and ingots from this source date from the reign of Claudius to that of Marcus Aurelius and Verus (49-ca. 169 A.D.). These mines were imperial property. Other mines were in Shropshire, near Shelve (Stiper Stones), in Flintshire, near Holywell, and in Derbyshire. These all belonged to the Emperor. They were worked during the first, second, and third centuries. In Gaul lead was produced in the eastern Pyrenees, the Cevennes, and the Alps, but nearly all the ingots found in Gaul and in Germany were imported from Great Britain or from Spain.

SPAIN

Representation of Iberian Weapons.—In *R. Arch.*, fifth series, VI, 1917, pp. 68-74 (2 figs.), H. BREUIL discusses the weapons represented in the reliefs of the arches of triumph at Carpentras, Orange, and Avignon, and one similar monument at Narbonne, Béziers, and Tauroentum. Swords of Iberian type and *falcatas* seem to indicate that the victories commemorated belong to a time earlier than the victories of Marius over the Cimbri and Teutones in 102 and 101 B.C., though the inscriptions on the monuments are much later.

The Painted Pottery of Emporion.—In *R. Arch.*, fifth series, VI, 1917, pp. 75-94 (9 figs.), P. PARIS discusses the Iberian pottery of Emporion (Ampurias). Geometric patterns, vegetable ornamentation, and imitation of the drawings on Greek black-figured vases are distinguished. There was no "school" of Emporion; in fact, the painted pottery seems to have been, for the most part, imported.

The Bas-reliefs of Marquinez.—In *R. Arch.*, fifth series, XIII, 1921, pp. 25-32 (fig.), H. BREUIL discusses the carvings at Marquinez (Alava) in a grotto called *Santa Leocadea*. He finds that this grotto and others of the same sort, which are very numerous in the region, are, like similar grottoes in southern France, to be ascribed to the times after the fall of the Roman Empire, not to the Aeneolithic period.

Saguntum.—In *R. Arch.*, fifth series, XII, 1920, pp. 50–81 (4 figs.), PIERRE PARIS gives a description of Saguntum (Murviedro) and a sketch of its history in ancient and more recent times. There seem to be no remains earlier than Roman times, except some traces of a “cyclopean” wall. There are remains of the Roman fortifications and considerable remains of the theatre. Very few inscriptions have been found, and the stamped pottery unearthed here is very likely not of local manufacture. The Saguntine pottery mentioned by Juvenal and Martial seems to have been coarse ware.

FRANCE

Tiles and Bricks of Roman Gaul.—In *R. Arch.*, fifth series, XII, 1920, pp. 189–210, ADRIEN BLANCHET calls attention to the importance of a knowledge of the sizes and qualities of tiles and bricks employed at different times and places. He gives a list of the dimensions of Gallo-Roman bricks and tiles found and measured in many different places in France. Apparently such materials were not made with special reference to the particular building in which they were to be used. In general, Gallo-Roman bricks are of finer clay than mediaeval bricks, which are likely to contain coarse sand.

SWITZERLAND

The Treasure of Fins d’Annecy.—In *R. Arch.*, fifth series, XI, 1920, pp. 112–206 (10 figs.), W. DEONNA publishes and discusses a treasure found in 1912 at the Fins d’Annecy (ancient Boutae), near Geneva, and now in the museum at Geneva. The treasure consists of four coins, three silver pins, two silver rings, two silver statuettes, and a silver patera. The patera was turned upside down and the other objects were covered by it. The coins are: a bronze of Tiberius, a silver coin of Marcus Aurelius, a silver plated coin of Maximinus and a silver plated coin of Gordianus. The treasure was hidden probably in the third century. Of the rings, one has the inscription VITIA (probably meant as a reversible inscription *vita*), the other a male head between the letters Δ and S (really the triangle and the double curve, both of which are ancient symbols). The heads of the pins are: a beardless herm, a pine cone, and an acorn. One of the statuettes is a Venus Anadyomene, the other a satyriscus. The bottom of the patera is decorated with a rosette surrounded by a circle with rays, the whole being a solar symbol. In the interior the centre is occupied by a profile head of Augustus (laureate) and the words Octavius Caesar. About this centre are the following:—Apollo and the Python, Apollo and the Cyclopes, Apollo and Neptune building the walls of Troy, Mercury seated, Apollo between an altar and a temple, and the inscription ACTIVS. About all this is a serpent. These reliefs are compared with those of Phoenician or Cypriote paterae, connexion with the Pergamene school of sculpture is noticed, coins of Augustus are compared, the correspondence of the patera with Propertius, IV, 6, Horace, *Od.* IV, 5, and passages from Virgil and Ovid is shown in some detail. The patera speaks plainly of the deification and worship of Augustus; it celebrates his victories, especially that of Actium, and alludes to the

identification of Augustus with Apollo and with Mercury. It was made, probably by a Gallo-Roman artisan, not much before or after the beginning of the Christian era.

GREAT BRITAIN AND IRELAND

Stonehenge.—In *The Nineteenth Century*, April, 1920, p. 678, HADRIAN ALLCROFT maintains that the monument at Stonehenge can hardly be earlier than 300 B.C. It is probably identical with the "temple of Apollo" mentioned by Hecataeus of Abdera as existing on an island of the Hyperboreans, who may be identified with the Cimbri, Cimmerii, Cymru, etc. Tacitus (*Germ.* 37) attributes to the Cimbri *castra ac spatia*, as monuments of their power. (*S. R., R. Arch.* XII, 1920, p. 109.)

The Petroglyphs of Ireland.—In *R. Arch.*, fifth series, XIII, 1921, pp. 75-78, H. BREUIL makes seven divisions of the rock sculptures of Ireland. The art of these sculptures is connected with Galicia, Brittany, and Scotland. The author intends to publish, in collaboration with Professor Macalister of Dublin, a detailed account of their joint researches.

NORTHERN AFRICA

The Ram of Baal-Ammon.—In *R. Arch.*, fifth series, XIII, 1921, pp. 79-107 (10 figs.), EUSÈBE VASSEL discusses the use of animal figures, especially the ram, in Punic art, and reaches the following conclusions:—(1) The animals on the Punic stelae of Carthage are indubitably divine attributes raised to the rank of symbols. (2) The ram is at Carthage the attribute and symbol of Baal-Ammon, as he is attribute and symbol of Zeus Ammon in the Cyrenaica and of Amon at Thebes. (3) The three divine types are often confused and they flow from a common source of totemic nature. (4) That source must be sought in Libya or in Egypt. (5) The probabilities seem to be in favor of Libya.

The Harbors of Carthage.—In *R. Arch.*, fifth series, XI, 1920, pp. 373-374, CECIL TORR replies briefly to some criticisms of his views which were expressed by Dr. L. CARTON, *ibid.* IX, 1919 (Mai-juin). Dr. CARTON replies *ibid.* XIII, 1921, pp. 143-146, adding that he has discovered the fountain of a thousand amphorae (cf. *C.R. Acad. Insc.* 1920, pp. 258-268), has followed a cyclopean wall at the baths of Antoninus, and has found a stele with a man praying before the walls of Carthage, a Corinthian capital (the only one known from the baths) etc. *Ibid.* pp. 146-148, Dr. CARTON, replies to some remarks made by Camille Jullian (*R. Ét. Anc.* XXII, 1920, p. 236).

Magical Inscriptions Explained through Hebrew.—In *R. Arch.*, fifth series, X, 1919, pp. 28-30, CH. BRUSTON explains the Latin and Greek letters on a tablet found at Sousse, Tunisia (*Bulletin Archéologique*, 1910, p. 142) as transliterations of Hebrew words. The tablet as a whole is intended to insure the defeat of a chariot-driver. *Ibid.* XII, 1920, pp. 47-49, the same author interprets a talismanic stone found at Carthage and published in the *Bulletin Archéologique*, 1910, p. 142. It represents the god $\text{IA}\omega$, with the head of a

cock, holding in one hand a whip, in the other a shield. His legs are replaced by serpents. On the other side of the stone is the inscription

ΘΩΒΛ
PEAIAΩ
IΩCEBH

After which is "a sign like a Z with open angles and barred," then "three other similar signs crossed by a horizontal line," then "a square crossed by two diagonals." The Greek letters may be rendered from Hebrew, "Happiness to the friend (s?) of Iaho who dwell," and the other signs may signify unity, the number three, and the number four. Then the whole means "Happiness to the friend (s?) of Iaho who dwell near the One, the Three, and the Four," *i.e.* God and the seven archangels.

Carthaginian Amulets.—In *R. Arch.*, fifth series, X, 1919, p. 224 f., CH. BRUSTON proposes readings for the two amulets reproduced *ibid.* IX, 1919, p. 365 (after *Bull. Arch.* 1916, p. 136):—(1) *Bicit te Leo de tribu Iuda, avis* (the owl, represented on the amulet), and, reverse, *Invisa, invidiosa, invicta, devastator avis, quis ne non tu[um] flagellum fecerit totum fran[gi?]* (2) *Vincit Leo de tribus Iuda, Radis D[avid]*, inscribed about an owl, and, reverse, *Invidia invidiosa nihil tibi, at, anima pura et munda, Micael, Rafael, Uriel, G(a)briel Victoria.*

EARLY CHRISTIAN, BYZANTINE AND MEDIAEVAL ART

GENERAL AND MISCELLANEOUS

Trefoil Plan in Byzantine Architecture.—In *R. Arch.*, fifth series, XI, 1920, pp. 82–111 (22 figs.), L. H. VINCENT discusses the origin of the trefoil plan (and, incidentally, of the cruciform plan) in Byzantine architecture. Without attempting a definite proof, he shows that the influence of Constantinople and its court is the most probable reason for the popularity of this plan in the fifth century A.D. and even earlier.

The Church of the Holy Sepulchre.—In *The Antiquaries Journal*, I, 1921, pp. 3–18 (pl.; 3 figs.) A. W. CLAPHAM gives a sketch of the history of the successive buildings on the site of the Holy Sepulchre in Jerusalem, and describes in detail the existing remains of the Latin monastic buildings of the twelfth century. The description is accompanied by plans of the several churches, and by a large colored plan indicating the date of each part of the present structure.

An Early Christian Ivory Relief.—In *Burl. Mag.* XXXVIII, 1921, pp. 178–195 (4 pls.), E. MACLAGAN publishes a fragment of an ivory relief with figures from a representation of the Miracle of Cana which clearly belongs to a series (most of the twelve pieces are in Milan) of plaques about whose origin there has been much dispute, some placing it as sixth century work done in Egypt, others considering it eleventh century work of southern Italy. The new relief, recently acquired by the South Kensington Museum, indicates, with its unmistakable classical spirit, that the former theory is the correct one; and it sup-

ports the traditional view that the series of reliefs were carved to decorate the lost chair of St. Mark in Grado.

Archaeological Investigations in Constantinople.—In a brochure entitled *Mission Archéologique de Constantinople* (Paris, 1921, Leroux; 74 pp.; 40 pls.; 6 figs.; 8vo) JEAN EBERSOLT reports the results of his studies in Constantinople in 1920. He describes: (1) the imperial sarcophagi at Tchynili-Kiosk, (2) the ruins of the great palace of the Byzantine emperors, brought to light by the fire of 1912, (3) the mosque of Arab-Djami and its Byzantine sculptures, (4) a number of unpublished or little-known Byzantine inscriptions, (5) thirty-five manuscripts seen by him in the library of the Seraglio, a list of which supplements the catalogue given by Ouspensky in *L'Octaëdrique du Sérail*.

The Church of the Apostles at Constantinople.—In *Jh. Oest. Arch. I. XVI*, 1913, pp. 212–230 (8 figs.) R. EGGER discusses the Church of the Apostles erected by Constantine in Constantinople, in which he was afterwards buried.

Tapestries.—The golden age of tapestry weaving, when the art was followed in its legitimate realm, that of two-dimensional decoration, is well represented in the present textile exhibition at South Kensington, discussed by F. BIRRELL in *Bur. Mag. XXXVIII*, 1921, pp. 166–172 (3 pls.). Two of the finest specimens are the famous Falconry, lent by the Musée des Arts Décoratifs, and the Bear-Hunting, lent by M. Demotte.

The Legend of St. Christopher.—In *Gaz. B.-A. III*, 1921, pp. 23–40 (9 figs.), G. SERVIÈRES traces the development of the legend of St. Christopher in art, and the reasons for its popularity. The type soon became so firmly fixed that all artists of whatever nationality represented the same moment in the legend and conformed in the principal details of the composition to the same form and arrangement.

Early Engravers.—In *Jb. Preuss. Kunsts. XLI*, 1920, pp. 189–207 (2 pls.; 5 figs.), M. LEHRS writes on a number of primitive copper engravers, supplementing his book which appeared in 1908 on the history of German, Flemish, and French copper engravers of the fifteenth century.

ITALY

Early Italian Sculpture.—In *Burl. Mag. XXXVII*, 1920, pp. 77–78 (2 figs.), M. H. LONGHURST discusses the style of a fragment of a marble font lately presented to the Victoria and Albert Museum. The similarity of the figures to some in Parma and Modena is sufficient to assign its origin to that district and to date it about 1200. The work is apparently by a provincial sculptor influenced by Antelami and his followers.

Early North Italian Sculpture.—In *Mh. f. Kunstw. XIV*, 1921, pp. 1–13 (10 figs.), E. GALL takes the old relief of Apostles in the cathedral at Milan as the basis for a study of late twelfth century sculpture in Northern Italy and its relation to the work of Provence. The apostle relief is apparently the one referred to by documents as one belonging to the period of the archbishop Hubert von Crivelli; hence the date of its origin must lie between 1185 and 1187. The style also agrees with other sculpture of this period, *e.g.*, that of the ciborium in S. Ambrogio, Milan, and some examples in Modena. The atelier in Modena from which came the master of the Milan apostle relief and his great contemporary, Antelami, was apparently the bearer of the Provençal

influence which became evident toward the end of the seventies of the twelfth century. The apostle relief must originally have decorated a lecturn in the old cathedral.

Early Pisan Sculpture.—Three pieces of sculpture in the Blumenthal collection, New York, which may be attributed to Niccolò and Giovanni Pisano, are published by S. RUBENSTEIN in *Art in America*, IX, 1921, pp. 109–119 (4 figs.). A beautiful seated Madonna shows the unmistakable characteristics of Niccolò and represents him at his best. The less detailed, more intimate style of Giovanni is evidenced in a standing Madonna and the bust of a young woman; the latter is a fragment from the cathedral of Siena.

A Madonna by Giovanni Pisano.—In *Dedalo*, I, 1920, pp. 361–363 (fig.), I. B. SUPINO publishes a Madonna represented in a collection of photographs made some years ago. The style is clearly that of the Pisan school and quite as certainly that of Giovanni di Nicola himself. The period of its execution must lie between that of the group of the Cappella Scrovegni at Padua and the Pisan pulpit. The location of the sculpture, however, is unknown, and the writer is acquainted with the work only from the photograph.

The Camposanto at Pisa.—In *Dedalo*, I, 1920, pp. 311–321 (20 figs.), P. BACCI distinguishes two sharply differentiated styles in the sculptural decoration of the façade of the Pisan camposanto. The first of these represents the work of a realist; the heads are strongly modelled, the eyes are made more realistic through indication of the pupils and irises by incisions and the provision for the insertion of glass, and all the features are so sharply individualized as to leave no doubt that the heads were the portraits of kings, queens, archbishops, etc. The second style, which follows that of Giovanni di Nicola Pisano, is much more generalized, the bulbous eyes have no indication of pupils or irises, and the smooth features present types rather than portraits.

Tino di Camaino.—In *Rass. d'Arte*, VIII, 1921, pp. 73–84 (pl.; 9 figs.), P. BACCI gives some biographical data, in which a new document figures, concerning Tino di Camaino. The tomb of Arrigo VII in the cathedral at Pisa is made a special object of study. It is shown that instead of Tino's having merely begun the work, as has been supposed, he executed the splendid reclining figure of the emperor and the frieze of Apostles.

Sieneſe Paintings in American Collections.—In *Art in America*, VIII, 1920, pp. 272–292 and IX, 1920, pp. 6–21 (10 pls.), F. M. PERKINS publishes the second and third parts of his discussion of early Sieneſe paintings in America. To an anonymous follower of Simone Martini he assigns the beautiful Adoration of the Magi in Mr. Lehman's collection. Despite recent suggestions to the contrary, the little Crucifixion in the Museum of Fine Arts, Boston, is again attributed to Lippo Memmi, and a St. Stephen in the Blumenthal collection is attributed to his school. Lippo di Vanni, in his characteristics not as a follower of the Lorenzetti, but as an imitator of Lippo Memmi, is well represented in four panels of the Madonna and Saints in the Lehman and Blumenthal collections. Some clarification of the characteristics of Luca Tommè is arrived at through a study of his Madonna in the Blumenthal collection, which has been ascribed to Bartolo di Fredi. For the study of Taddeo di Bartolo and his school there is good material in the collections of Mr. Platt, Mr. Blumenthal, and Mr. Davis. And, finally, Sassetta and his followers are considered in the present article as represented in their paintings in the Lehman, Johnson, and Fogg Museum collections.

FRANCE

Burgundian Sculpture of the Twelfth Century.—In spite of documentary evidence to the contrary, it has commonly been held that the beautiful capitals of the abbey of Cluny belong to the twelfth century. But that they must have been done in the preceding century is shown by A. K. PORTER (*Gaz. B.-A.* II, 1920, pp. 73-94; 22 figs.) in tracing their influence upon Burgundian sculpture elsewhere from the very beginning of the twelfth century. And the influence of these and other sculptures of Cluny was much more far reaching, extending even to Lombardy and Spain.

The Cathedral of Poitiers.—A description of the sculptures on the west façade of the cathedral of Poitiers and an analysis of the influences evident in them are given by E. MAILLARD in *Gaz. B.-A.* II, 1920, pp. 289-308 (11 figs.). The great variety of styles in this comparatively small group of sculptures, the only one to be seen in Poitou today, can be accounted for only when we recognize that these are only a few of the innumerable sculptures that formerly adorned not only this cathedral but many parochial churches of the region; nearly all have been destroyed in the course of the centuries.

The French Cathedrals and their Makers.—In *R. Arch.*, fifth series, XI, 1920, pp. 290-362, XIII, 1921, pp. 77-95 (4 pls.), F. DE MÉLY, by means of inscriptions and manuscript records, establishes the names of a great number of architects, sculptors, and other artists who were employed in creating the great cathedrals and other mediaeval churches of France. The notion that the artists of the Middle Ages did not sign their works and were not recognized as individuals is abundantly disproved by unimpeachable evidence. In many instances families or "dynasties" of artists seem to account for resemblances between works which are sometimes widely separated.

The Cathedral of Reims.—The recent publication of a splendid album of the Cathedral of Reims, with introduction and notes by M. P. Vitry, leads to a number of observations by E. MALE in *Gaz. B.-A.* III, 1921, pp. 73-88 (13 figs.). The most important one concerns the architects of the cathedral; from a study of a sixteenth century drawing of the old labyrinth of the cathedral it is concluded that there was represented in the centre of the labyrinth a fifth, and the principal, architect, rather than the bishop. The name of this master architect is unknown, but his existence explains the fact that to the other four architects documents ascribe work only on the upper parts of the building. In the latter part of the article an interpretation of the subject matter of some of the sculpture is given; and an estimate is made of the influence of the earlier sculpture of Chartres cathedral upon that of Reims, and of the latter upon the sculpture of Chartres.

Adam.—In *R. Arch.*, fifth series, XII, 1920, pp. 338 f., W. DEONNA interprets the letters D M on the keystone of the vault of the cathedral at Poitiers

(twelfth century) as the name of the first man, not, as interpreted by F. de Mély (*ibid.* XI, 1920, p. 350) of an architect. The arrangement of the letters symbolizes the four regions of the world.

Bronzes by Nicholas of Verdun.—In *Burl. Mag.* XXXVIII, 1921, pp. 157-166 (3 pls.), H. P. MITCHELL discusses two bronze figures of Moses and a Prophet in the Ashmolean Museum, Oxford. A study of their style shows that

they are the work of Nicholas of Verdun in about 1180, and there are good reasons for believing that they originally formed part of that artist's decoration of the ambo in the abbey-church of Klosterneuburg near Vienna.

Thann.—In *Gaz. B.-A.* II, 1920, pp. 43-59 (pl.; 11 figs.), C. CHAMPION traces the history of the village of Thann in Alsace and describes its most interesting monuments. The finest building is the church, with its richly sculptured great portal of the thirteenth century and its smaller, flower-like portal of the Virgin dating from the fifteenth century. Obernai, with its picturesque Hôtel de Ville and other municipal and private buildings, is the subject of a second article (*Ibid.* pp. 195-208; pl.; 10 figs.).

BELGIUM AND HOLLAND

A Fifteenth Century Dutch Sculptor.—In *Jb. Preuss. Kunsts.* XLII, 1921, pp. 20-32 (pl.; 9 figs.), T. DEMMLER gives a critical study of the work of Nicolaus Gerhaert von Leyden. The strongest determining influence in his development seems to have come from the northern Netherlands. Though we have little remaining sculpture of that region to compare with him, the painting readily shows the connexion, *e.g.*, the Van Eyck altarpiece. Nicolaus Gerhaert's art is particularly significant for Germany, because he worked in so many places, Oberrhein, Ulm, Nürnberg, etc., influencing other artists with his fresh observation of nature and his ability to give a nobler turn to the inherent realism of northern art.

The Ghent Altarpiece.—In *Gaz. B.-A.* III, 1921, pp. 108-118 (2 pls.; 6 figs.), L. MAETERLINCK studies the authorship of the retable of the "Mystic Lamb" through an investigation of preceding and contemporary painting in Ghent. It is found that this polyptych is entirely characteristic of the work being done in Ghent at the time of the Van Eycks and, hence, that there is no reason for assigning its origin to Holland. That the work is not to be exclusively attributed to the two Van Eyck brothers is concluded from documentary evidence that they had many assistants in their studio, that Hubert employed not only painters, but goldsmiths, sculptors, engravers, and even workers in glass.

GERMANY

Romanesque Sculptures of the Upper Rhine.—Foreign influence that largely determined the style of the art of the upper Rhine in the second half of the twelfth century is evident in monuments published by G. WEISE in *Mh. f. Kunstw.* XIII, 1920, pp. 1-18 (8 figs.). To the master who made the tympanum of the portal of the church of St. Gall at Basle and who displays many North Italian and French characteristics belongs a tympanum of the church of St. Morand; the former work is thought to date before 1185, the latter about 1200. An independent master did work for the abbey church at St. Ursanne and the Nicholas chapel of the cathedral at Freiburg. Related works of the twelfth and thirteenth centuries are in the churches at Egisheim and Petershausen.

A Fourteenth Century Pietà.—In *Z. Bild. K.* XXXII, 1921, pp. 87-92 (7 figs.), W. NOACK writes on a large wooden group of the Pietà, which, because of its isolation in the Ursula cloister at Erfurt, is but little known. The work

is closely similar in every superficial detail, at least, to two other representations of the subject, one in Coburg, the other in Leubus. But the three are very different in spirit. The Coburg group, dating about 1330, is a decade older than that at Erfurt and retains more of the thirteenth century monumental feeling and restraint. The Leubus group is more than a decade later and has less strength and significance.

A Romanesque Altar-cloth.—In *Ber. Kunsts.* XLII, 1921, pp. 71–76 (3 figs.), OTTO VON FALKE describes a Romanesque altar-cloth of white linen, with ornament of the same material, recently acquired by the Kunstgewerbemuseum in Berlin. On the ends of the cloth, which hung over the ends of the altar, are represented the Annunciation and the Visitation; on the other the Nativity and the Adoration of the Magi; while the centre of the cloth had two panels, one of which showed the Women at the Tomb and the other the Ascension. This work, which is not only the finest, but the earliest of its class, is said to have been found in a monastery near Fulda. The resemblances of style which it exhibits to the *velum pictum* of the Apostelkirche in Cologne and to other works of the Rhenish school prove that it is to be attributed to that school. It was made in the latter half of the twelfth century.

Swabian Wood-carvings.—In *Ber. Kunsts.* XLII, 1921, pp. 59–62 (3 figs.) J. BAUM discusses wood-carvings on shrines by Swabian artists of the thirteenth and fourteenth centuries, with special reference to a group representing Christ crowned with thorns, acquired for the Kaiser Friedrich Museum in 1900. A fragment in Stuttgart from a representation of the Death of the Virgin, and a Deposition found in the Schnell collection in Rarenberg are similar in style, and it is probable that these two fragments and the Berlin piece were parts of one carved altar, made in the region of Lake Constance about 1350.

GREAT BRITAIN AND IRELAND

English Fifteenth Century Embroidery.—In *Burl. Mag.* XXXVIII, 1921, pp. 74–81 (2 pls.), P. TURPIN, publishing two important pieces of embroidery in the Lille museum, which he classes as fifteenth century English work, calls attention to the importance of details in determining the school from which embroidery of this period comes. Technique, textile materials, and general appearance give scarcely any aid in such identification, because, all over Europe the technique spread from one monastery to another and the general forms, borrowed from illuminations, show the same mixture of Flemish and Italian influences. Iconographical and decorative details that were considered sufficiently insignificant to be left to the individual artists are the surest means of identification.

Irish Miniatures at St. Gall.—In *R. Arch.*, fifth series, XIII, 1921, pp. 1–6 (pl.), JEAN EBERSOLT describes very briefly the miniatures in several manuscripts of Irish origin in the library of the monastery of St. Gall, and discusses the Crucifixion and the Last Judgment at the end of manuscript 51. These two miniatures follow Eastern, not Byzantine, iconographic traditions, but their style is Irish. As early as the seventh century the Irish monasteries were in regular connection with monasteries in the East.

RENAISSANCE ART

ITALY

A Bronze Statue by Michelangelo.—The bronze figure in the Louvre labelled "Jason or Apollo, Italian school, sixteenth century . . ." is attributed by J. SIX in *Gaz. B.-A.* III, 1921; pp. 166–176 (6 figs.), to Michelangelo. The subject is probably Apollo vanquishing the serpent Python, and the problem of movement in which the artist is here interested is almost the same as that which occupied him in his Bacchus, David, marble Apollo in Florence, and some other works.

Frescoes of the Capella Garganelli.—In *L'Arte*, XXIII, 1920, pp. 275–278 (2 figs.), G. ZUCCHINI gives an account of the frescoes by Cossa and Ercole da Ferrara which formerly decorated the Garganelli Chapel in the cathedral at Bologna, were only partly saved when the chapel was destroyed in 1606, and were completely destroyed in the middle of the nineteenth century, so that only partial copies now remain to give an idea of the work, which was so highly valued by Michelangelo that he said the chapel was worth half of Rome.

An Assumption of the Virgin by Turino Vanni.—In *R. Arch.*, fifth series, VI, 1917, pp. 231–233 (fig.) B. BERENSON publishes a panel in the museum at Bayeux. This is probably the upper part of a taller panel. The lower part, now missing, showed the apostles standing around the empty tomb of the Virgin, with Thomas reaching up for the girdle which she drops. The Virgin is seated in a mandorla which is surrounded by angels. Above the mandorla is the upper part of the figure of Christ who holds up the mandorla with his hands. This charming painting is ascribed to the early part of the career of Turino Vanni, soon after 1390.

Andrea da Formigine.—In *Rass. d'Arte*, VIII, 1921, pp. 45–50 (4 figs.), L. FRATI publishes data concerning the life and work of Andrea da Formigine, with special reference to the carved wooden panels of an altar in S. Gregorio in Bologna, which were executed in the middle of the sixteenth century and show the artist at his best.

A Statuette by Cozzarelli.—In *Art in America*, IX, 1921, pp. 95–101 (6 figs.), A. K. PORTER publishes a statuette of Bacchus in the Winthrop collection, New York, which he attributes to the Sienese sculptor Cozzarelli. This attribution involves a study of the work hitherto attributed to that artist and a more careful distinction than has previously been made between his style and that of his master, Francesco di Giorgio.

The Buffalmaco Hypothesis.—In support of the hypothesis that the so-called Cecilia-Master should be identified with Buffalmaco O. SIRÉN offers new material in *Burl. Mag.* XXXVII, 1920, pp. 176–184 (4 pls.). (For previous discussion see *Ibid.* December, 1919—January, 1920). Most important are the ruined frescoes in the Badia di Settimo, Florence, which Ghiberti and subsequent writers say are the work of Buffalmaco. Though so badly defaced, the movement and the general lines of the drapery of the figures show the identity of the artist with the Cecilia-Master and make it possible to ascribe to this same Buffalmaco two more pictures, a Dominican saint, in the sacristy of S. Stefano, Florence, and St. John the Baptist, in Christ Church Library at Oxford.

Raphael.—An entire number of *Emporium*, LI, 1920, pp. 115–208 (4 pls.; 100 figs.), is devoted to an appreciation of the work of Raphael in commemoration of the fourth centenary of his death. L. VENTURI discusses the character of the artist and the general progress of his artistic development through his short life. J. RUSCONI analyzes the Deposition in the Borghese gallery. N. TARCHIANI studies the drawings by the master. M. SCHERILLO studies him as a poet and his relationship to contemporary poets. And A. LUALDI discusses the development of music and the theatre at the time of Raphael and suggests that the flourishing condition of these arts at this time had no little influence upon Raphael's painting.

Raphael and Castiglione.—In *Gaz. B.-A.* II, 1921, pp. 209–214 (pl.; 2 figs.) R. DE LA SIZERANNE writes on the relationships between Raphael and Castiglione. Raphael came closer to the ideal of the author of the *Cortegiano* than any other artist of his day, and Castiglione worked with Raphael and furnished not a few of the ideas which the latter represented with paint.

The Borgia Apartments.—In *Gaz. B.-A.* II, 1920, pp. 353–366 (2 pls.; 8 figs.) J. ALAZARD discusses the work of Pinturicchio in the Borgia apartments of the Vatican. Pinturicchio does not show himself a philosopher in his work, but a colorist, succeeding best in the representation of gorgeous costumes and in the delineation of features which he has before him in visible models. The portrait of Pope Alexander VI in the fresco of the Resurrection is a paramount example of the kind of work in which Pinturicchio excelled.

A Drawing for One of the Vatican Stanze.—In *Dedalo*, I, 1920, pp. 305–311 (4 figs.), G. FIOCCO discusses a drawing in the Galleria Querini Stampalia in Venice, a preliminary study for the Coronation of Charlemagne in the Stanza of the Incendio. The great importance of the work lies in the fact that while the finished painting contains no mark of the master's own hand, part of the drawing is actually by him and we can get from it the true spirit of the creator before it was hidden beneath the misinterpretation of the imitator.

A Portrait Group by Sebastiano del Piombo.—In *Burl. Mag.* XXXVII, 1920, p. 169 (pl.), T. BORENUS publishes for the first time a reproduction of a group of four portraits painted by Sebastiano del Piombo in 1516, when he was strongly influenced by Raphael's style. Previous attempts at identification of the portraits are unsatisfactory and no other can at present be offered.

Bronzino.—In *Dedalo*, I, 1920, pp. 223–247 and 322–331 (2 pls.; 21 figs.), M. TINTI writes an analysis of the style of Bronzino, whom he characterizes as the Italian Ingres. Growing out of the art of Michelangelo and Pontormo, Bronzino developed a very different spirit; his calm, contemplative figures seem, as compared to the work of the two preceding artists, like a calm after a tempest. More and more he developed a sculptural quality, showing a strong influence of Greek marbles not only in occasional borrowing of the pose of a figure, but always in the quiet, serene dignity and impersonal expression. But in spite of this sculptural quality, Bronzino was also a great colorist, not in the sense of a Titian, but in the sense of the Florentines: his color is essentially decorative.

Notes on Giovanni Bellini.—In *Burl. Mag.* XXXVII, 1920, pp. 170–176, A. SYMONS writes an interpretation and appreciation of a number of Giovanni Bellini's paintings; their relationship to the work of Mantegna is especially emphasized.

A Fragment of Tintoretto's Paradise.—In *Gaz. B.-A.* II, 1920, pp. 375-384 (4 figs.), G. SOULIER publishes a painting in the Sherman collection, Rome, which is not only of high merit in itself but also throws light upon the development of Tintoretto's painting of the glory of Paradise in the Ducal Palace, Venice. The sketches in the Louvre and in the Prado show early stages in the development; the Sherman painting gives us a detail of three musical angels, just above the Christ, produced in full size as if for immediate use in the final composition—and yet changes were made; these three figures are not faithfully reproduced in the complete painting.

Veronese Drawings.—In *Burl. Mag.* XXXVIII, 1921, pp. 54-59 (2 pls.), T. BORENIUS gives a *catalogue raisonné* of the drawings in pen and sepia by Paul Veronese that are known to him. In this class of drawings many small figures are grouped together on a single sheet and are often accompanied by notes in Veronese's hand.

Madonnas by Fiorenzo di Lorenzo.—In *Dedalo*, I, 1920, pp. 355-360 (pl.; 3 figs.), U. GNOLI points out the relationship between Pinturicchio's Madonna in the National Gallery, London and three by Fiorenzo di Lorenzo; the latter are in the National Gallery (the Salting Madonna), the Jacquemart-André Museum, Paris, and the Museum of Fine Arts, Boston. With reference to the Salting Madonna, it has previously been suggested that it is the source from which Pinturicchio drew his composition; but that the influence flowed in the opposite direction and that all three of the Fiorenzo Madonnas here in question were inspired by the one by Pinturicchio is shown by a study of the earlier works of Fiorenzo in Perugia; until he came under the sway of Pinturicchio, his work was of a very different cast.

Pictures at the Burlington Fine Arts Club.—In *Burl. Mag.* XXXVIII, 1921, pp. 131-138 (4 pls.), R. FRY discusses some of the most important paintings in this winter's exhibition at the Burlington Fine Arts Club. A predella of the Nativity by a minor artist of the school of Pesellino is unusually interesting in design. Two pictures from Sir Herbert Cook's collection are characteristic of Ercole de' Roberti and formed part of a series representing types of noble women. But the most interesting piece in the exhibition is Prince Paul of Serbia's panel by Piero di Cosimo representing a forest fire. Using as a basis this painting, the two panels in the Metropolitan Museum, and the Battle of the Centaurs and Lapiths belonging to Messrs. Ricketts and Shannon, the writer studies Piero's attitude toward life, science, and mythology, and the nature of his interest in the fantastic.

The Italian Renaissance Garden.—In *Dedalo*, I, 1920, pp. 368-391 (22 figs.), L. DAMI describes the development of the Renaissance garden in Italy, growing out of small, simple arrangements inspired by the idyllic vision of nature which characterized the fourteenth century, into the complicated geometrical plantings, primarily architectonic, which reached their fullest development in the sixteenth century.

The Guelf Palace.—In *Dedalo*, I, 1920, pp. 250-262 (10 figs.), A. LENSI traces the history of this fine old palace in Florence begun in the thirteenth century and carried on through the Renaissance in additions by such men as Brunelleschi and Vasari. The proposed restoration of the building leads to the suggestion here of the changes that will be necessary to approximate the original appearance of the palace.

The Horne Collection.—In *Dedalo*, I, 1920, pp. 162–185 (23 figs.), C. GAMBA writes on Herbert Horne's gift to Italy in 1916, consisting of his palace in Florence and his art collection housed in it. The little palace itself, formerly the palazzetto Corsi, is important as an example of Giuliano da San Gallo's work and a perfect model of the city home of modest dimensions, decorated with the most elegant sobriety in the tradition of Brunelleschi. Though the collection contains some works of first importance in the pure arts, its greatest interest lies in the fine examples of early furniture and household articles which the donor has carefully searched out during many years.

Titian's Lucretia and Tarquin.—In *Z. Bild. K.* XXXII, 1921, pp. 9–13 (pl.; 3 figs.), A. E. POPP analyzes Titian's painting of Lucretia and Tarquin in the Academy at Vienna. The composition, the lighting and the movement of the figures is completely out of keeping with Titian's treatment of half length figures; undoubtedly the painting as it appears today is only about half of the original canvas, which must have represented the subject in much the same way as his earlier treatment of it, some idea of which we may gain from Cornelis Cort's engraving. The Vienna painting bears the same relation to Titian's earlier representation of the subject as his Christ crowned with thorns in Munich bears to the master's treatment of the same subject in the Louvre: the Munich and Vienna conceptions are more calm, more restrained, and consequently more powerful.

A Diptych by Giovanni Bellini.—In *L'Arte*, XXIII, 1920, pp. 279–281 (2 figs.) A. RAVÀ gives a new attribution to a diptych in the Liechtenstein gallery, Vienna, which was formerly attributed to Antonello da Messina. Besides the fact that the diptych, with the busts of a man and his wife on the front side, and a deer on the reverse, bears sufficiently clear indications of the style of Giovanni Bellini, it is recognized as the work referred to in an inventory of the Vendramin collection, of 1565, where Bellini is mentioned as the author.

Bertoldo di Giovanni as a Medallist.—In *Ber. Kunsts.* XLII, 1921, pp. 25–29 (4 figs.) W. VON BODE attributes to Bertoldo di Giovanni, the pupil of Donatello, a series of small circular plaques with representations in relief which E. Molinier assigned to an anonymous master of the North Italian school. Several reliefs by this artist are in the Berlin collection, and some especially fine examples are owned by M. G. Dreyfus of Paris. Bertoldo's plaques are marked by a rather flat and picturesquely handled half-relief, by a somewhat careless casting on a wax model, and by the numerous and small figures of his designs, somewhat indefinitely executed, but sufficiently characterized. His subjects are taken from classical mythology. To the same artist should be assigned a stucco relief of the Crucifixion, cast from a lost bronze, which Bode once attributed to a Sienese artist. *Ibid.* XXXVII, 1916, p. 181 ff. The resemblance of this stucco relief to a clay sketch by Donatello which has been found in the magazines of the Bargello, and to some of the works now attributed to Bertoldo, make it probable that he was the maker of the lost bronze. The variety of classical subjects in Bertoldo's work illustrates strikingly the direct influence which the literary knowledge and taste of Lorenzo de Medici exercised on the Florentine artists of his time.

A Renaissance Vase.—An example of the Renaissance imitation of Egyptian vases, whose beauty consists in richness of material and elegance of line, is published by G. POGGI in *Dedalo*, I, 1920, pp. 5–7 (pl.; fig.). It is a lapislazuli

vase executed in 1583 for Francesco de Medici. A drawing in the Uffizi and a documentary memorandum reveal the designer and the decorator of the vase. The design was drawn by B. Buontalenti and the gold ornaments were made by the Flemish goldsmith, Jacomo Delfe.

Venetian Bronzes.—In *Dedalo*, I, 1920, pp. 463-475 (12 figs.), G. NICODEMI publishes several small bronzes, objects of ornament or common use, such as ink wells, salt cellars and the like, of which Padua was the centre of production and Donatello the original inspiration. The development of the art as it spread to Brescia and is now represented in the Museo dell' Età Cristiana at Brescia is here discussed.

A Venetian Vase.—In *Dedalo*, I, 1920, pp. 248-249 (2 figs.), G. LORENZETTI publishes a small "pilgrim's flask" in the Museo Correr at Venice, which is of unusual importance because it is one of very few examples of early sixteenth century vases made entirely of "vetro lattimo," so called because of its milk-white color. The designs, taken probably from some engraving based on profane story, are beautifully executed and form an interesting commentary on Venetian life and costumes.

Quattrocento Painting near Rome.—In *Boll. Arte*, XIV, 1920, pp. 185-232 (7 pls.; 44 figs.), A. B. CALOSSO continues his discussion of the origins of painting of the quattrocento in the vicinity of Rome. The combined characteristics of the style of Umbria and the Marches appear in the works discussed, and the artists are, for the most part, indirectly connected with Gentile da Fabriano. The most important is Pietro Coleberti, whose signed frescoes in the little church of S. Caterina at Roccantica are here fully described and analyzed. Coleberti shows particularly close relationship with Ottaviano Nelli. On the basis of this series of frescoes other paintings may be more or less certainly attributed to the artist, particularly the Virgin of the Annunciation in the church of S. Benedetto at Piperno. The characteristics of pupils of Coleberti are discovered in a number of works, and a study of other artists more closely related to Gentile is made. Among the latter is Antonio da Alatri, author of a signed triptych in the Museum of S. Maria Maggiore in Alatri.

SPAIN

An Exhibition of Spanish Painting.—The comprehensive exhibition of Spanish painting recently held at Burlington House is described by C. J. HOLMES in *Burl. Mag.* XXXVII, 1920, pp. 269-276 (3 pls.). The collection included examples from the fourteenth century down to modern times; among them were works by such masters as Bartolomé Vermejo, Fernando Gallegos, Luis de Morales, El Greco, and Goya.

Velazquez.—In *Z. Bild. K.* XXXII, 1921, pp. 36-39 (5 figs.), A. L. MAYER publishes five paintings which he ascribes to Velazquez. Three are attributed to his younger activity: a half-length figure of the apostle Paul in the Gil collection, Barcelona, the portrait of the poet Gongora in a private collection, and the portrait of Diego Rioja in Madrid. Two show the later style of the master, after his first journey to Italy: these are the spirited portrait of a banner-bearer and the portrait of a young man—the latter lately acquired by the Louvre.

El Greco.—Several paintings and a drawing attributable to El Greco are

published by A. L. MAYER in *Z. Bild. K.* XXXII, 1921, pp. 55-60 (7 figs.). The most interesting of these, perhaps, is the St. Veronica lately acquired by Kuno Kocherthaler, Madrid, for which the painter's mistress doubtless served as model.

Catalan Art in Sardinia.—In *L'Arte*, XXIII, 1920, pp. 284-288 (2 figs.), E. BRUNELLI shows that the author of the ancona of the Visitation in the gallery at Cagliari, signed Johaes Barcells, is to be identified with Giovanni Figuera, who worked in Sardinia in the middle of the fifteenth century. This painting, together with the same artist's ancona of S. Bernardino, is the principal document of the penetration of Catalan influence into the painting of Sardinia and served as a model for native artists.

FRANCE

Diane de Poitiers and Gabrielle d'Estrées.—In *Gaz. B.-A.* II, 1920, pp. 157-180 (15 figs.) and pp. 249-266 (4 figs.), S. REINACH discusses a number of sixteenth century French and Flemish paintings in which Diane de Poitiers or Gabrielle d'Estrées figures. Frequently the painting in which Gabrielle appears is merely a copy of an earlier one where Diane is the heroine.

BELGIUM AND HOLLAND

Reynier and Claes Hals.—In *Burl. Mag.* XXXVIII, 1921, pp. 92-97 (2 pls.), G. HOFSTEDE DE GROOT publishes paintings by Reynier and Claes Hals, two sons of Frans Hals, which show them to have retained but little of the quality of their father's work. Two small half-length figures at The Hague by Reynier are most carefully finished, with no dash of technique. And the village view signed by Claes shows close resemblance to the work of a group of Ruisdael's pupils. Doubt is cast by this writer upon the painting of a girl reading in the Mauritshuis; but A. BREDIUS (*Ibid.* pp. 138-143) gives documentary evidence to prove that the signature on this picture is really that of Claes Hals. T. BORENIUS (*Ibid.* p. 143; pl.), contributes to the reconstruction of this artist's work by calling attention to a painting of The Huckster, owned by Mr. E. Bolton, which bears the same signature as is found on the Mauritshuis picture.

Jan Gossaert.—The early work of Jan Gossaert is discussed by F. Winkler in *Jb. Preuss. Kunsts.* XLII, 1921, pp. 5-19 (pl.; 10 figs.). The eclectic tendency of the artist appears very early: he is influenced by Dürer's drawings, paintings of Jan van Eyck, Gerard David and Leonardo, the Bruges-Ghent miniatures, and the antique.

A Painting by Matsys.—A portrait of the "Ugliest Princess in History," Duchess Margaret of Tyrol, by Quentin Matsys, is discussed by W. A. GROHMAN in *Burl. Mag.* XXXVIII, 1921, pp. 172-178 (pl.). The painting, which now belongs to Mr. Hugh Blaker, is evidently a later work than the drawing of the duchess which has been wrongly, it would seem, attributed to Leonardo da Vinci.

Jacob van Utrecht.—To the signed paintings by Jacob van Utrecht L. BALDASS in *Z. Bild. K.* XXXI, 1920, pp. 241-247 (9 figs.), adds a few others that betray the style of the same master. They are the portrait of a man, dated 1532, in the Hoogendijk collection, a triptych of the Madonna with

donors in the Riga museum, an Adoration of the Kings in Vienna, with a replica of it in Munich, and a triptych of the Mourning of Christ in the gallery at Schleissheim.

A Still-Life by Vermeer.—In *Burl. Mag.* XXXVII, 1920, pp. 169–170 (pl.), J. O. KRONIG publishes a still-life painting (its ownership is not given) which he attributes to Jan Vermeer of Delft on the basis of its resemblance to the still-life details in his known pictures. Such a subject as this, a pure still-life, is what we should expect Vermeer to have sometimes painted and it is only surprising that no example has previously been found.

Brueghel's Adoration of the Kings.—One of the most important works of Pieter Brueghel the Elder is his Adoration of the Kings, which is now being secured for the National Gallery, London. Brueghel's revolt against the tendency toward meaningless splendor and his indulgence in satire reach their climax in this painting, where the Magi, the by-standers, and Joseph are shown in a much more likely, if far less dignified, light than is usual with paintings of this period—or any other. (C. J. HOLMES, *Burl. Mag.* XXXVIII, 1921, p. 53; pl.)

Rubens' Judith.—A short study of Rubens' treatment of the subject of Judith with the head of Holofernes is made by R. OLDENBOURG in *Z. Bild. K.* XXXII, 1921, pp. 66–68 (2 figs.). In contrast to the Flemish love of fleshly opulence and baroque expression which characterizes Rubens' treatment of the subject in Braunschweig, the example in the collection of Maria Borghesani at Bologna, though very similar to the earlier painting in composition, is more restrained and passive, preparing the way for Titian's influence, which came a little later.

A Painting by Willem Buytewechs.—A picture of an open-air banquet, now in the Kaiser Friedrich Museum, has been tentatively attributed to Willem Buytewechs. In *Ber. Kunsts.* XLII, 1921, pp. 44–48 (4 figs.) K. ZWEGE VON MANTEUFFEL confirms this attribution, finding evidence for it in the resemblance of the painting to signed drawings by this artist. One of these, in Berlin, shows a seated figure in an unusual posture which is almost a replica of that of a principal figure in the painting.

GERMANY

A Fourteenth Century Panel in Berlin.—In *Ber. Kunsts.* XLII, 1921, pp. 81–87 (6 figs.) W. MANNOWSKI discusses a small German panel of the Nativity recently purchased by the Kaiser Friedrich Museum. In many external details it shows obvious and direct imitation of Giotto's treatment of the same subject in the Arena Chapel at Padua. The spirit and style of the picture, however, associate it with a Bohemian painting of the Nativity in the Stift Hohenfurt in Bohemia, with a Crucifixion in the Boehler collection in Munich, and with paintings of the Virgin and Child adored by Angels and of the Crucifixion in the National Museum in Munich. The Berlin painting is to be attributed to a Bavarian painter of the fourteenth century. It is almost certain that he saw the Arena Chapel himself.

Miniatures attributed to Dürer.—In *Burl. Mag.* XXXVII, 1920 pp. 61–62, C. DODGSON disputes the recent attribution to Dürer of a repetition in illumination of the artist's Little Passion. These miniatures, some of them bearing

Dürer's monogram, are in a book said to have been lately discovered at Nuremberg. Some of them are reproduced by M. H. Delarue in *Pages d'Art*, May, 1920. Aside from the fact that Dürer would not have repeated his compositions, these miniatures are lacking in the life and spontaneity of Dürer's work; they are the production of a respectable Nuremberg craftsman, working to order.

Dürer and the Antique.—In *Jb. Preuss. Kunsts.* XLII, 1921, pp. 34–50 (11 figs.), M. HAUTTMANN discusses Dürer's interest in the antique, which began in about 1497. It is significant that this interest was not confined to Dürer's sojourn in Italy, but that it developed in Germany. The artist moved with the trend of humanistic study in his own country, and it was in the collection of antiquities in Augsburg that he found inspiration for not a few of his figures and compositions.

Dürer's Early Drawings.—In *Jb. Preuss. Kunsts.* XLI, 1920, pp. 208–213 (pl.; fig.), E. Bock discusses some of the early drawings of Dürer, particularly a pen drawing in the cabinet of copper engravings at Berlin. The subject is uncertain, but probably it is the design for the dedication page of a book. A point of special interest lies in the fact that the drawing is reversed, as is obvious from the Dürer monogram, thus indicating that the drawing was being prepared for making a wood engraving.

Dürer's Apollos.—A study of Dürer's drawings and engravings in which appear Apollo and Diana or Apollo alone is made by E. PANOFKY in *Jb. Preuss. Kunsts.* XLI, 1920, pp. 359–377 (10 figs.), with special reference to the master's relationship to Barbari. It is shown that here as in many other cases the influence came from the Italian artist to the German, rather than *vice versa*. But Barbari's representation of Apollo and Diana served Dürer as a suggestion or incitation rather than as a model. Barbari was influential in directing Dürer to new problems, rather than in giving him new solutions.

Augsburg Sculpture.—Two of the most important early Renaissance sculptors of Augsburg, Adolf and Hans Daucher, are treated by P. M. HALM in *Jb. Preuss. Kunsts.* XLI, 1920, pp. 214–343 (2 pls.; 73 figs.). A very significant feature of this period was the adoption of a new kind of marble with warm tone and with a fine grain which made it particularly suitable for careful, detailed work. The father and son here discussed were pioneers in the use of the new material. The investigation concerning Adolf Daucher begins with the high altar of the St. Ann Church at Annaberg in the Erzgebirge, since it is the only work which can be attributed to him on documentary evidence. But more important than this altar is the sculptural decoration in the Fugger Chapel at Augsburg, which is here ascribed to the master. Of the son, Hans Daucher, more signed and dated works are known, extending over the period 1518–1527. These include a number of portrait medallions and plaques, while not a few grave reliefs and other smaller sculptures may be assigned to him.

Johannes Vest.—Some fundamental material for the study of the Vest family in their relation to late Renaissance terra-cotta work is given by K. SIMON in *Mh. f. Kunstw.* XIV, 1921, pp. 56–69 (21 figs.). The member of the family of whom special account is here taken is Johannes Vest von Creussen. There are only two signed reliefs by this artist—one of them dated 1599—but on the basis of these two others may quite certainly be assigned to him.

Sixteenth Century German Tapestries.—In *Mh. f. Kunstw.* XIV, 1921, pp. 70-96 (2 pls.), H. GÖBEL contributes to the history of the manufacture of pictorial tapestries in Torgau and Weimar by a study of the artists patronized by Johann Friedrich der Grossmütige. The interest of this prince in tapestries amounted almost to a passion in his later life, and the three most important artists employed by him were Henrich von der Hohenmuel, Hugo vom Thale, and Seger Bombeck.

A Suit of Armor of the Period of Maximilian.—In *Ber. Kunsts.* XLII, 1921, pp. 42-44 (2 figs.) P. POST describes an exceptionally complete and finely executed suit of armor belonging to the time of the emperor Maximilian which has recently been acquired by the Zeughaus in Berlin. It is to be attributed to an armorer of Augsburg or Nuremberg.

AMERICAN ARCHAEOLOGY

GENERAL AND MISCELLANEOUS

Metals in Prehistoric America.—In *Mus. J.* XII, 1921, pp. 35-42 (pl.; fig.) W. C. F(ARABEE) gives a brief account of the use of metals in prehistoric America, with particular emphasis on bronze in South America. The varying proportions of copper and tin in South American bronze are probably to be attributed to technical considerations in the manufacture of various kinds of utensils and ornaments. Among the objects of prehistoric American metal recently acquired by the University of Pennsylvania Museum is a knife cast in solid bronze. A snake of the same material is represented on the back of the blade, and the handle is ornamented with a flamingo in solid gold. The technique of casting gold is illustrated by two gold bells in the same museum. One is in the form of a bat standing in a loop of gold wire. The other bell is surmounted by an ornament in the form of an animal, with a similar loop of wire.

Marble Vases from the Ulua Valley.—In *Mus. J.* XII, 1921, pp. 53-74 (22 figs.) G. B. G(ORDON) describes a series of marble vases from the Ulua Valley in Honduras, now in the collection of the University of Pennsylvania. Most of them have handles shaped in imitation of animals. The sides of the vases are ornamented with a rich design in low relief, of which the principal elements are abstractions from animal forms.

Publications of the Bureau of American Ethnology.—The monumental product of the year for the bureau has been *Ethnology of the Kwakintl*, based on data collected by George Hunt, part 1, (1921) by FRANZ BOAS, forming the 35th Annual Report of the Bureau of American Ethnology, 1913-14, 750 pp. This work will set a new precedent in methods of ethnological research since the customs and beliefs are recorded in original text with spaced-off translations on the same page, providing simultaneously a basis for linguistic study and a more correct account of native customs than if they were recorded in English alone. The descriptions of manufacture and use of articles of utility include practically every product of handicraft, not even excepting stone and bone work. Industries, hunting, fishing and food gathering, preservation of food, recipes for cooking, beliefs and customs concerning food and utensils,

prayers, weather charms, taboos, customs of birth, treatment of infants, death and souls and shamanism are discussed. Feasts, social position and marriage and finally swear-words form a concluding section.

Dr. TRUMAN MICHELSON's contribution: *The Owl Sacred Pack of the Fox Indians* (Bulletin 72, Bureau of American Ethnology, Washington, 1921, 83 pp.; 4 pls.; 8vo) is another ethnological text giving an account of an individual sacred medicine bundle of the Fox (Algonkian) Indians, accompanied by a short linguistic discussion and list of stems.

Recent Publications of the Heye Museum, New York.—*Cuba Before Columbus*, by M. R. HARRINGTON (Indian notes and monographs, 1921 part 1, vols. 1 and 2; 507 pp.; 109 pls.; 111 figs.) is an extensive monograph giving the results of several expeditions to Cuba in 1915 and 1919. Excellently illustrated and well provided with maps, this work focuses the conclusions of much archaeological research in Cuba by various authors. The principal conclusion is, that previous suspicions by Fewkes of a dual culture composition on the island are correctly conceived. Harrington defines two cultures: a primitive phase, which he terms the Ciboney, whose remains are found in caves on the eastern coast of the island and sparingly in the whole interior, and a localized culture, much more advanced, affiliated with Tainan remains in the other West Indian Islands, Porto Rico, Jamaica and the Bahamas. The former contrasts between the two are great. They are admirably shown in a sketch illustrating the different manufactures (pl. CVIII). The Tainan peoples had artificially deformed skulls, were well advanced in ceramics and skillful makers of ornaments, the Ciboney had undeformed skulls, used shells for bowls and shell gouges and celts. The inference is that the Taino overran the primitive Ciboney. Resemblances between the latter group and the peninsular culture of Florida are strong, thus adding another link to the chain of sequences connecting the West Indian cultures with those of the extreme Southeastern states (p. 422). Yet Harrington discredits any indication of relation between Cuba and the Maya of Yucatan (p. 421). The Taino culture emanated from the northeastern part of South America where both Carib and Arawak may still be found. Part 2 of this important work, still to appear, is announced to deal with the living Indian descendants in Cuba and the Tainan remains.

Besides the second edition (1921) of the *List of Publications of the Museum of the American Indian, Heye Foundation* (37 pp.), the following octavo pamphlet is off the press since the last reviews were given: *Bladed Warclubs from British Guiana*, by M. H. SAVILLE, 1921 (37 pp.; 4 pls.; 2 figs.). The author describes several stone-headed clubs conforming to the type found in the West Indies and related with some degree of probability to the stone celts occurring with great frequency as far north as southern New England.

Miscellaneous Articles on American Archaeology.—In the *American Anthropologist* XXIII, 1921, No. 2, are four articles of archaeological interest. 'Further Notes on Isleta,' by ELSIE CLEWS PARSONS; 'An Unusual Group of Mounds in North Dakota,' by GEORGE F. WILL; 'The Need of Archaeologic Research in the Middle West,' by FREDERICK HOUGHTON, and 'Aboriginal Sites near "Teaoga," now Athens, Pennsylvania,' Part 1, by LOUISE WELLES MURRAY.

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PUBLICATIONS OF THE ARCHAEOLOGICAL INSTITUTE

Annual Reports

Reports II-XVII. (1881-1896.) Each, \$0.50. The First Annual Report (1880), with accompanying papers by LEWIS H. MORGAN, W. J. STILLMAN, and JOSEPH THACHER CLARKE (Pp. 163. Illustrated), is out of print.

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- Vol. I. (1882.) Report on the Investigations at Assos, 1881. By JOSEPH THACHER CLARKE, with an Appendix containing Inscriptions from Assos and Lesbos, and Papers by W. C. LAWTON and J. C. DILLER. 8vo. Pp. 215. Boards. Illustrated. \$3.50.
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- Vol. IV. (1892.) Part II of above Report. 8vo. Pp. 591. Boards. Illustrated. \$3.00.
- Vol. V. (1890.) Contributions to the History of the Southwestern Portion of the United States. By A. F. BANDELIER. 8vo. Pp. 206. Boards. Map. \$2.00.

Reports, Index

REPORT ON THE WOLFE EXPEDITION TO BABYLONIA IN 1884, 1885. By WILLIAM HAYES WARD. (1886.) Pp. 33. Paper. \$0.50.

REPORT OF THE FELLOW IN AMERICAN ARCHAEOLOGY, 1902-1905. A Comparative Study of the Mayas and the Lacandones. By ALFRED M. TOZZER. Pp. xiii, 195. 41 plates. Paper. \$1.25.

INDEX TO PUBLICATIONS OF THE INSTITUTE AND OF THE SCHOOL AT ATHENS, 1879-1889. By W. S. MERRILL. (1891.) Pp. 89. Boards. \$1.00.

American Journal of Archaeology, Second Series. One volume (four numbers) annually, beginning in 1897. Each, \$5.00.

INDEX TO AMERICAN JOURNAL OF ARCHAEOLOGY, *Second Series*. Vols. I-X. (1897-1906.) Paper. \$1.00.

Bulletin of the Archaeological Institute of America. One volume annually, beginning in 1910. Each, \$1.00.

Art and Archaeology non-technical illustrated magazine. One volume (six numbers) annually beginning July, 1914; monthly beginning in 1916. \$4.00 per annum.

The Argive Heraeum. Published for the Institute and the School at Athens.

The Argive Heraeum. By CHARLES WALDSTEIN, with the coöperation of G. H. CHASE, H. F. DE COU, T. W. HEERMANCE, J. C. HOPPIN, A. M. LYTHGOE, R. NORTON, R. B. RICHARDSON, E. L. TILTON, H. S. WASHINGTON, and J. R. WHEELER. In two volumes. Large quarto. Boston and New York: Houghton, Mifflin & Co. Vol. I, 1902; Vol. II, 1905. \$30.00 for the two volumes, in cloth; \$60.00, in full morocco (\$20.00, in cloth, for members of the Institute and of the Managing Committee. \$44.00, in full morocco).

The Codex Venetus of Aristophanes. Published by the Institute and the Society for the Promotion of Hellenic Studies.

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